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ABSTRACT

Intended for researchers, scholars, and policy makers who are interested in family-oriented education programs for disadvantaged groups, this monograph examines the Mountain-Plains Career Education Model IV, a residential, family-based education program developed to improve the economic potential and lifestyle of selected student families in a six-state area. The document is divided into seven chapters. Chapter 1 provides the background and an overview of the program. Chapter 2 examines Mountain-Plains curriculum development activities and products. Chapter 3 covers several aspects of the Mountain-Plains evaluation in theory and practice. Chapter 4 examines the counseling and career guidance components, and chapter 5 analyzes the occupational program. Recruitment, selection, placement, and follow-up services are discussed in chapter 6. (Chapters 2 through 6 follow a similar format which contains the following elements: an introduction, discussion of conceptual boundaries, examination of the Mountain-Plains experience, a list of lessons learned from the experience, and a summary with conclusions and recommendations.) Chapter 7 presents a general summary of the Mountain-Plains experience and lists the major conclusions. (BM)

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THE MOUNTAIN-PLAINS EXPERIENCE:

Lessons From A Residential Career Education Center Serving Rural Disadvantaged Families

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

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FOREWORD

One of the most comprehensive experiments the Education and Work Group of the National Institute of Education has sponsored was the Mountain-Plains Education and Economic Development program. Originally conceived in the U.S. Office of Education, Mountain-Plains was transferred to NIE when it was created in mid-1972. From the beginning, the Mountain-Plains program was aimed at a potentially large group of people in this country: rural families with incomes below the poverty level. Based on national census data, their number is estimated at above two million.

Preliminary results of the Mountain-Plains program are noteworthy:

1. Approximately 75 percent of entering Mountain-Plains families complete the program.
2. Of those who complete, 89 percent are employed within three weeks following program exit.
3. The income gain for completing students three weeks post program exit averages $206 per month for the head of household.
4. Annual family income increases on the average by $4,000 six months post program exit.

As both a job training delivery system and a research and development program, Mountain-Plains responded to certain needs we at NIE believe career education must address:

- Helping people make informed decisions about occupations and the kinds of education that will help them reach their career goals.

- Providing occupationally relevant curricula and other educational experiences that bring people in contact with a wide variety of occupational roles for purposes of career exploration.
- Making education widely available, in schools and universities and in less traditional settings.
- Providing people who do not have adequate resources or financial support with the aid they need to continue their occupational preparation.
- Bringing academic and occupational curricula closer together and linking educational providers from K through adulthood more closely with each other and the workplace.

This monograph examines the Mountain-Plains experience for researchers, scholars and policy makers interested in the effects of a residential education program on rural disadvantaged families.

Staff at Mountain-Plains who designed and implemented the program provided substantive input for the preparation of this monograph. The background and brief program description for Chapter I was contributed by Harold Johnson, from our NIE staff, who served as project monitor almost from the beginning.

Steve Zifferblat, former Stanford University professor, examines Mountain-Plains' structured learning activities in Chapter II. Robert England of the staff at Glasgow also contributed to this discussion.

How to assess the effectiveness of social service programs like Mountain-Plains often perplexes the research and evaluation community. Chapter II lays out some aspects of evaluation in theory and in practice at Mountain-Plains and draws heavily on the wisdom of Daniel Stufflebeam, Western Michigan University, one of the nation's leading educational evaluators. David Coyle, Director of Research and Evaluation at Mountain-Plains, provided a day-to-day perspective from the operational level.

Helping persons face realities about themselves, their families, and their roles as citizens in today's society requires a variety of counseling approaches no matter what the educational setting. At Mountain-Plains, these needs were magnified as families pull up their roots to start new lives. Edwin Herr, Pennsylvania State University, an authority on counseling in career education, presents his views on Mountain-Plains in Chapter IV. Richard Manley and Rowan Conrad, of the program staff, contributed their insights as well.

If one of the major purposes of career education is to provide persons with employable skills, then vocational education must be an integral part of any career education design. Mountain-Plains' occupational program was of particular interest to Louis Kishkunas, Superintendent of Schools in Denver, Colorado. Chapter V includes his analysis as well as that of Richard Mutterer, administrator of educational services at Mountain-Plains.

Mountain-Plains kept close contact with students from recruitment and selection through placement and on-the-job experience. Robert Darcy of Colorado State University's Center for Economic Education, notes in Chapter VI that such follow-through is a service most programs only talk about. T. R. Flores and George Faith also contributed their expertise to Chapter VI as key program personnel at Mountain-Plains.

Within each chapter the following concerns are also addressed:

- How, if at all, did Mountain-Plains practice relate to traditional innovative practice elsewhere?
- How, if at all, did Mountain-Plains experience and findings relate to the relevant "theoretical" literature? How has Mountain-Plains experience helped advance our knowledge?

- How does the Mountain-Plains experience help resolve current theoretical or methodological issues involving career education? How are policy perspectives relevant to these issues influenced by Mountain-Plains findings?

Particular thanks must be extended to Leo Myers, former assistant state superintendent of public instruction in Oregon and more recently a consultant on career education to the Education Commission of the States, who served as editor-in-chief for this monograph. His on-site review of the Mountain-Plains program, coupled with experience as a local and state administrator and researcher, served us well. His Chapter VII summarizes the author's findings and concludes by presenting implications for researchers, policy makers and scholars concerned with the educational and socioeconomic needs of the rural poor.

Practitioners who might wish to replicate one or more of the program components should consult the Mountain-Plains Handbook.

Corinne Rieder
Associate Director, NIE
Education and Work Program

CHAPTER I

PROGRAM OVERVIEW

INTRODUCTION

The purpose of this chapter is to present a brief overview of the program's history and intent, its management, policies, the setting in which it operates, the programs it offers and persons it serves, effects to date, and its relationship with other agencies. In addition, the general format for the monograph is presented at the conclusion of this chapter.

HISTORY AND INTENT

The Strategic Air Command base at Glasgow, Montana, which serves as the program site, covers 6,800 acres of range land in the northeast corner of Montana. The base is 18 miles north of Glasgow and 50 miles south of the U.S.-Canadian border. The nearest city exceeding 50,000 population is over 200 miles away. Base facilities were designed to accommodate 8,200 military and civilian support personnel. Total investment in the base approaches $100,000,000.

In 1968 the base was officially closed, leaving a huge complex of houses, offices, and other buildings vacant. The availability of these facilities invited numerous suggestions regarding how they might best be used. A 1970 study by Eastern Montana State College, funded by the U.S. Office of Education, concluded that the facilities were best suited to some type of educational program. In view of the nature of facilities (i.e., residential units, recreational facilities, schools, church, store, etc.), it was suggested that the base would serve as an excellent site for a residential, family-oriented educational program.

In April of 1971, the U.S. Office of Education (USOE) authorized a $4.0 million grant for the period ending April 30, 1972 to establish a "model career education research and development program" at the Glasgow Air Force Base. The project was to begin in May 1971 and run five years.

To better accommodate the research and development aspects of the program, monitoring responsibility for Mountain-Plains was shifted to the National Institute of Education (NIE) in mid-1972.

SUMMARY OF PROGRAM OPERATIONS

The program is administered under contract with the Mountain-Plains Education and Economic Development Program, Incorporated, and bears the corporate name Mountain-Plains. Mountain-Plains is a nonprofit corporation chartered by the State of Montana and registered in the states of North and South Dakota, Nebraska, Wyoming and Idaho. Articles of incorporation were approved and signed on April 6, 1971 by the Secretary of State of Montana.

Mountain-Plains' Board of Directors consists of 13 voting members and 2 non-voting members. Two voting members are selected from each participating state. Members include representatives from--

- The Governor's office.
- Key state education agencies.
- Other vocational education programs.
- Principal Indian tribes or tribal unions.
- Valley County (Glasgow, Montana).

Board members' terms are staggered to avoid loss of continuity. Members receive no salary or other remuneration except for per diem and travel costs.

The Board exercises the normal powers of a corporation, including the right to enter into contracts, employ personnel, and authorize rules and regulations affecting program operations. As the policy making body of the corporation, the Board retains a full-time staff of professionals and clericals to carry out the terms of the program contract. The President/Executive Director of the Corporation implements corporate policy.

The Mountain-Plains Career Education Residential Model maintains full-time field offices in the capital cities of all states served by the program: Helena, Montana; Cheyenne, Wyoming; Boise, Idaho; Lincoln, Nebraska; Bismark, North Dakota; and Pierre, South Dakota.

Mountain-Plains is not the sole occupant of the base. Several local contracted services are located on base, and a number of persons live on base but are employed elsewhere. Mountain-Plains accounts for about two-thirds of the base population. The U.S. Air Force is the base host.

Mountain-Plains' isolated location entails several disadvantages. Travel--even between Glasgow and the base--can be extremely hazardous in inclement weather. Securing supplies and recruiting professional personnel can be difficult. And the great distance between towns (even within Montana) limits auto travel. In addition, there are no direct flights between Glasgow and major cities. Necessary layovers make scheduled airline travel time consuming and costly.

On the positive side, the base is modern and offers total facilities for Mountain-Plains operations, including housing for staff and participant families, offices, classrooms, a supermarket, visitors' accommodations, a gym, theater, elementary school and a hospital. Twelve buildings totalling some 150,000 square feet of space are used for Mountain-Plains offices and instructional facilities. Mountain-Plains pays the Air Force for occupation, renovation, maintenance, and utilities on a square footage basis.

Over 200 housing units are available for participating families, along with an unlimited supply of staff housing. Participant families occupy two- or three-bedroom frame duplexes with attached garages. A rental charge of $40 per month is assessed each family; this charge is paid out of an $85 weekly stipend granted to students on the basis of class attendance.

The Target Population

The program is geared to serve socioeconomically disadvantaged rural families. The families Mountain-Plains serves are younger (head of household 27.3 years old), less well educated (10.5 years of formal schooling completed), have more female heads of household (15 percent), and lower annual family incomes ($2,800 prior to entry) than most U.S. families.

The key concept governing the program is that educational services should be directed toward the entire family, not just the individual. Families move from within the six-state region to Glasgow Air Force Base, where they reside for approximately eight months while participating in the program.

Services to Families

The following services are provided participating families:

1. Career Guidance, required for both adults

2. Occupational Preparation, mandatory for the head of household and optional for the spouse

3. Foundation Education, including math skills and communication skills, for those who need or want it

4. Family and Individual Counseling

5. A Family Core curriculum, designed to provide skills in home management, health, consumer education, parent responsibility, community organization and recreation

6. Limited medical, dental and optical services

7. Financial support through an $85 per week stipend

8. Child Care services for preschool youngsters

9. Community and job placement services

10. Followup after placement.

All 10 services are provided on a continuous basis. Families enter Mountain-Plains weekly, progress at their own rate and exit to jobs when they complete their individual programs.

Mountain-Plains Curricula

Early in the program students receive instruction and consultation in family life skills, basic education (as needed for a chosen occupational area), and career guidance. Career guidance culminates with development of an occupational preparation plan reflective of the individual student's needs and goals. Occupational Preparation is offered in four occupational clusters: office education, building trades and services, mobility and transportation, and tourism and marketing. These four clusters encompass forty-six career preparation programs in such areas as food services, marketing and distribution, secretarial work, carpentry, electrical wiring, radio and TV repair, plumbing, refrigeration, heating and ventilation, automotive and small engine mechanics.

Students who need additional work in math or communication skills enroll in Foundation Education before entering an Occupational Preparation curriculum. When a student masters the basic skills needed in his or her chosen occupation, that student exits Foundation Education and begins Occupational Preparation. Students may re-enter Foundation Education at any time for an intensive review.

Program completion is based upon proof of competency. Once the head of household (and in some cases, the spouse as well) completes Occupational Preparation, the family receives job placement, relocation and followup assistance from a Mountain-Plains field office in the chosen state of residence.

Family counseling is mandatory for everyone, and may last for a few sessions or for the entire time a student is at Mountain-Plains, depending on the student's needs. A mutually agreeable counseling program is worked out between each student and his or her counselor.

Pre-school children are enrolled in Mountain-Plains' Early Childhood Education program. Older children enter the public school system in Valley County, Montana. Elementary students attend school on base; secondary students are bused 17 miles into Glasgow.

Internal Evaluation

Mountain-Plains' internal evaluation system measures the program's success in meeting its internal performance objectives. This evaluation system provides for formative evaluation of program components through aggregation of participant achievement data. Terminal performance objectives are set for each program component, and records are maintained on student attainment of these objectives.

During student selection and orientation, data are collected to build an entry profile for each student. As programs (Family Core, Career Guidance and Occupational Preparation) are completed, more data are added to the participant's file. Ultimately, an exit profile is compiled which, upon comparison with the entry profile, provides indication of a student's progress. According to data currently available--

1. Approximately 75 percent of entering Mountain-Plains families complete the program.
2. Of those who complete, 89 percent are employed within three weeks following program exit.
3. The income gain for completing students three weeks post program exit averages $107 per month for the head of household.
4. Annual family income increases on the average by $4,000 six months post program exit.

With a full-time staff of 150, Mountain-Plains is capable of serving approximately 210 families--or about 800 to 850 persons--at any given time. Families enter Mountain-Plains at the rate of about 28 per month, and a comparable number are placed.

Interagency Communication

In fulfilling its program objectives Mountain-Plains must interact with a number of agencies. For example, in recruiting students, and later in placing them, Mountain-Plains utilizes the services of such state agencies as the Employment Security Commission, Department of Welfare, State Vocational Rehabilitation and State Correction Agencies.

At the federal level, the Bureau of Indian Affairs has provided assistance in both recruitment and placement, HEW and the U.S. Public Health Service have provided health care assistance. And, of course, Mountain-Plains has a continuing close relationship with the U.S. Air Force, the host organization on Glasgow Air Force Base.

MONOGRAPH FORMAT

The following format will be used in Chapters II through VI:

Introduction

- o What is included in the chapter
- o Relationship of the subject to the monograph
- o Significance for research and development

Conceptual Boundaries

- o The broader meaning and significance of the subject
- o Guidelines for analyzing the subject

The Mountain-Plains Experience

- o Objectives
- o Organization and functions
- o Efforts and results

Lessons Learned From The Mountain-Plains Experience, in relation to--

- o Tradition
- o Innovative developments
- o "Theoretical" literature

- Issues
    - (1) theoretical
    - (2) methodological
- Policy questions (pros and cons)

Summary, Conclusions and Recommendations

An essay has been written on each of the topics covered in Chapters II through VI. Additionally, numerous documents have been prepared by Mountain-Plains staff and consultants. Quotations from these essays and other documents are referenced, and a bibliography accompanies this monograph. Chapter VII, Summary and Conclusions, focuses upon lessons learned from the Mountain-Plains program.

Throughout the monograph, occasional reference is made to the contribution of the Mountain-Plains experience to extant literature. The reader is asked to keep in mind that such references are based on the knowledge of the six essayists employed by NIE to assess Mountain-Plains contribution to research. No new literature search has been conducted in conjunction with the preparation of this monograph.

CHAPTER II

CURRICULUM DEVELOPMENT

CHAPTER II

CURRICULUM DEVELOPMENT

INTRODUCTION

Goal

Mountain-Plains' overall curriculum development goal was to create a learner-centered environment in which the instructor would serve as a resource person. That goal has been realized. Although instructors monitor daily student progress, and the central office, with computer assistance, maintains student records and coordinates schedules,[1] the student acts as his or her own curriculum manager. This practice is meant to reflect Mountain-Plains' philosophy that adult students should assume responsibility for their own education.

Purpose of the Chapter

The purpose of this chapter is to describe Mountain-Plains' creation of a learner-centered environment through curriculum development. The discussion covers the curriculum design, the conceptual base and rationale for its use, and steps by which it was implemented. Chapter II also presents some of the lessons learned from Mountain-Plains' experience in designing curriculum. A summary at the end of the chapter offers some considerations for curriculum developers and other interested persons.

How Chapter II Relates to the Monograph

This discussion of curriculum development provides a basis for subsequent discussions throughout this monograph. Curriculum, by definition, constitutes the heart of any instructional program, and therefore is perhaps best considered in advance of such complementary functions as evaluation or provision of student services.

THE EXISTING CURRICULUM

Mountain-Plains' curriculum is based on a systems approach. That is to say, an effort is made to control the complex interrelationships which exist between various elements in the learning environment.

A systems approach makes possible the development of an empirically based process model. Though empirical models are not new in education, they have typically been employed in piecemeal additive fashion rather than from a perspective of dealing with the total environment.

A need for precision, relevance, and accountability in education for both learning and social behavior has been expressed by communities within education as well as without. Systems approaches have already been successful in dealing with total environments in fiscal, personnel, and administrative contacts in education.

The social and learning environment in a residential educational environment is complex and demands precise, innovative, and empirically based procedures. The tools and techniques of systems approaches, already successful with temporal, numerical, and fiscal referents, are invaluable in dealing with learning and social events, especially if employed with behavioral referents, such as those in the Mountain-Plains' curriculum.

While there has been a great deal of systems-oriented behavior on the part of educators, very little of this activity has actually attended to the most important product of any educational program: student learning. Education abounds with such systems innovations as cost-effectiveness, accountability, modular scheduling, individualized curricula, instructional technology. While these new techniques are important, the underlying purpose of education must be kept more carefully in perspective. We must ask, What are the effects on student behavior? The appropriate objectives of all educational programs concern student behavior. Too often we may engineer an exquisite bathtub environment without examining its effects on the baby.

Mountain-Plains' curriculum system not only embraces all the essential characteristics of the systems approach, but is unique in its scope. It extends beyond individuals to the family. It extends beyond basic academics to job competency. It extends beyond specific job competency to life style modification. The curriculum applies the systems approach to virtually all dimensions of the students' environment. It is an ambitious effort with enormous consequences for societal change in our country.

A distinguishing feature of Mountain-Plains' curriculum is that much of it has been constructed by practitioners in given occupations and subject areas. Under the guidance of the curriculum department, which furnished professional and technical assistance, instructors selected sources and topics relevant to pre-established student terminal objectives and students needs, and used these sources as a foundation for building their curriculum. The process is highly effective, and easy to use where positive staff attitudes prevail. The nation's schools have been groping for a means to end the impersonal, dehumanizing, mass-taught, sometimes learned, total education for the total population concept inherent in public education.

The Mountain-Plains' curriculum system appears to offer such means. Its open entry/open exit, individualized approach permits more efficient and effective use of all educational resources--facilities, instructors and students.[2]

CONCEPTUAL BOUNDARIES

The Broader Meaning and Significance of the Subject

We live in a world where basic institutions and their value structures are changing at an exponential rate. Our nation is in the middle period of social transition. During the first part of this period, and within the memory of living people, men moved from a pre-civilized to a civilized society. Great gains relating to our quality of life were made in science, technology and our general standard of living. Alvin Toffler has used the term "future shock" to describe a time change phenomenon resulting from rapid social-technical developments. The impact of such shock extends to all levels, but is most acutely felt by the most vulnerable persons in our society: the economically disadvantaged. Because these persons lack vocational skills and many important life skills, the changes that have rearranged their familiar pattern seem irrevocable. What social mechanism do we have to prepare the disadvantaged for competent, comfortable living in the future?

Educational curriculum is among those many agents of social change that have power to shape the skills of the individual and his family. Curricular design is the watershed of our technology, the means by which citizens prepare to cope with a "civilized" society. Educational curriculum must create new social and vocational opportunities for the disadvantaged family. Its central purposes are threefold: 1) to enhance the integrity and dignity of the individual, 2) to improve the lifestyle of the family as a whole; and 3) to transmit into usable skills the economic, social, and technological developments that influence learners' work and leisure activities.

What form will our lives take in upcoming decades? How will our school curriculum prepare our children for basic social changes? Current social and economic events dictate the following trends in curriculum development:

1. The education of disadvantaged children will receive higher priority than in the past.

2. More and more needy persons will make claims against education as employment demands ever higher levels of vocational and social competency. It seems likely

that our present curriculum will be vastly altered as people who have been ignored or neglected by the educational system attempt to benefit from it.

3. It seems likely that our curriculum design will embrace more cultural, social, and occupational instruction, and that its current academic emphasis will diminish.

4. Extensive supplementary schooling may be carried on through personalized self-instruction. Schools will serve all citizens on a continuing basis as their needs arise.

New social institutions will arise in response to these trends. Their charge will be to provide a socially, economically, and psychologically relevant curriculum to our constituency. The organization and capability of these rehabilitative institutions has yet to be determined. Very few large-scale efforts have been initiated in the area of social redesign for the disadvantaged. In this regard, Mountain-Plains represents a significant step into our future.

The role of occupational-educational curriculum is changing and will continue to change. Mountain-Plains proposes, therefore, to prepare families for change, not stability. While specific skills are emphasized as a key to occupational success, more pervasive and enduring values and attitudes are also integrated into the total educational experience of the family.

No one point of view regarding social and occupational education has been shown to be most effective. Mountain-Plains' curriculum nurtures a pluralistic, self-renewing occupational and social education program. The Mountain-Plains' curriculum implicitly emphasizes process and decision making, increasing the probability that it will continue to be relevant in a changing world. Mountain-Plains graduates possess the disposition and skills to change their careers and life styles.

Many persons feel that curriculum is most effective if it recognizes human individuality. Mountain-Plains assumes that learning styles, learning rates, and attitudes about what is important in learning constitute part of each individual's individuality. It is further assumed that a curriculum that recognizes and accommodates these differences fosters the development of self-directed students and families. Thus, Mountain-Plains' curriculum is largely individualized and self-paced.[3]

Guidelines for Analyzing the Subject

Mountain-Plains' curriculum will be described and analyzed in terms of effectiveness in meeting four student needs requisite for employability and life satisfaction (Mountain-Plains' two basic goals). The four needs concern development of--

- Employability skills.
- Home/life skills.
- Social involvement skills.
- Personal improvement skills.

The major hypotheses to be tested by the project are--

- That there is a necessary relationship between employability potential and quality of life.
- That placement and maintenance of the participant families in rural America can be achieved.
- That a family-oriented career education program can improve the employability, standard of living, and life satisfaction of rural families.[4]

THE MOUNTAIN-PLAINS EXPERIENCE

A systems approach requires the specification of objectives and the examination of all events related to achieving those objectives. The importance of specifying precise, measurable objectives has been repeatedly stressed by systems approach proponents. The Mountain-Plains' curriculum is characterized by observable performance-based objectives and requisite modules (learning activity packages or LAPs) to implement them.[5]

The Mountain-Plains curriculum is designed to support the project's mission:

> ... to develop, test and report the potential of a residential career education program to improve the economic and human viability of rural multi-problem families chosen from a western six-state region. Success will be measured from both the viewpoint of society and of the family.

From the viewpoint of society, the criterion of success will be economic payback to society as measured through cost-benefit analysis or economic return on investment.

From the viewpoint of the family, the criteria of success will be family and economic viability and satisfaction with job and life. Satisfaction with job and life will be measured directly. Family and economic viability is defined as family growth and development. The criteria of success will be: a) job-getting, job-holding and job-progress; b) effective interaction with economic and related social aspects of society; and c) effective family management.

All terms of the mission statement must be broken down so that they can be incorporated into the curriculum design. The term family success, for example, is taken to mean: 1) job-getting, job-holding and job-progression; 2) effective interaction with economic and related social aspects of society; 3) effective family management; and 4) satisfaction with job and life.

This general definition encompasses a number of skills, each of which may relate to one or more program objectives.

1. Employability Skills
    - World of Work skills
    - Work attitudes
    - Academic skills
    - Functional job skills
2. Home Life Skills
    - Family relations
    - Health
    - Home and consumer management
    - Leisure time skills

3. Social Involvement Skills

   - Academic personal improvement
   - Problem solving
   - Development and implementation of plans
   - Self-recognition skills

These general headings objectives were analyzed and redefined in terms of measurable behavioral objectives that describe the behavior expected of the learner upon program exit.

The behavioral objectives generated by instructors were reviewed and analyzed by Research Services personnel, and performance indicators were added to create behavioral objectives.

Behavioral objectives were further allocated and defined in terms of relevant curricular areas: Occupational Preparation, Family Care, Communication Skills and Mathematics Skills. The Mountain-Plains occupational curriculum covers over 40 subject titles (e.g., carpenter, clerk-typist, general mechanic), approximately 60 courses, several hundred units and about 2700 learning activity packages (LAPs). Objectives progress from the general level to the very specific.[6]

Organization and Functions

Because of the unique nature of Mountain-Plains' program and its target population, very little commercially available curriculum was found to be usable. Consequently, Mountain-Plains' staff developed a new curriculum by modifying and adapting extant materials and, in some cases, producing original materials as supplements. Mountain-Plains' pattern for curriculum development includes--

1. Identifying sequential performance activities required for achievement of respective student terminal objectives and job skills.

2. Developing a consistent format for constructing self-contained learning packages with pretests and postests, and organizing these LAPs into units and courses.

3. Providing in-service training for 40 to 50 staff members in this technique.

4. Supervising and coordinating that staff as they did task analyses, created content or adapted existing content to this curriculum approach, and constructed pretests and posttests (both cognitive and performance) for each area.

5. Creating forms, procedures and computer programs, and assembling a staff of full-time advisors to guide and monitor each student's progress.[7]

Mountain-Plains' curriculum is designed to be flexible so that individuals with a wide range of learning rates and academic backgrounds can progress at their own respective rates, and still benefit from the system. Rate of progress is determined by an individual's ability to accomplish specific objectives. The curriculum is competency based, self-paced, and capable of assessing the students' learning disabilities and strengths, prescribing learning sequences tailored to these strengths and weaknesses, and determining through the use of cognitive and performance tests whether a student has successfully accomplished these objectives.[8]

The basis of the Mountain-Plains curriculum, from general to specific, is as follows:

- Mission statement
- Student terminal performance objectives
- Job title objectives (or departmental accountability objectives)
- Course objectives
- Unit objectives
- Learning activity packages (LAPs).

At the present time the Mountain-Plains' curriculum comprises approximately 2700 objectives--one objective per LAP.

The Mountain-Plains curriculum is always open to modification through staff input to management. The rationale for allowing such change is explained in the following quotation from a document provided to Mountain-Plains staff:

> The best way to stifle creativity is to demand 100 percent assurance that a change is desirable or that the proposed change will work. We are not interested in doing that; but we are interested in: a) managing and controlling change, b) assuring that we use our educational system to help us define where to improve

our program and perhaps, suggest how to do it. This means use of information or data, for data is the lifeblood--the energy--which keeps the system working. One of the major characteristics of any system is that it provides for feedback (information on how the system is working) to components of the system.

Everything discussed to date--e.g., the "systems approach," Mountain-Plains' philosophy and process, the establishment of measurable objectives, evaluation mechanisms, and so forth--relates to proposing the introduction of change within a system--specifically our system.

At its most basic, it is simply the application of the scientific method in an educational, human-oriented setting. It requires the definition of a problem ("problem" defined at the broadest sense); the summarization of the information used in discovering or corroborating that a problem does in fact exist; description of how the information supports the contention that the problem exists (how it is analyzed); what it is that might be attempted to alleviate the problem (the hypothesis to be tested); the conditions under which the alternatives will be introduced and used (methodology and identification of relations and constraints); and how one will know if the alternative has worked (evaluation mechanism).

"Problems," as we use the term, basically related to: a) to what degree we are accomplishing our basic objectives. In short, our effectiveness. These include student terminal performance objectives and the basic objectives of support components--e.g., reprographics. This can be assessed in terms of a fixed criteria (a minimum level of 80 percent of students validating); external information, or a belief that there is a way to further maximize objective attainment, b) how efficiently we are accomplishing these objectives--how well does our process function. Basic measures of these are time and/or cost. Is there a quicker or cheaper way to accomplish what we are accomplishing now? Obviously the two are frequently interrelated, and one often constrains the other--we have an idea to improve our attainment of objectives, but our costs would double.

In summary then, a problem can be a "real" problem, which we need to solve if the system is not to be endangered--for example: completion rate of students; income differences for existing students; reasonable costs for family; basic achievement of our department objectives.

> It can also be simply a better way to do something--to maximize or improve the achievement of our department objectives; to save money; improve morale; save instruction, and so forth.[9]

In summary, change is recognized at Mountain-Plains as a means of overcoming specific problems or as a response to the need for a better way of doing things. For example, curriculum can be modified through the addition or deletion of particular job titles as employment needs in the six-state region shift. If Mountain-Plains continues to train people for an occupation in which job opportunities are waning while ignoring another area in which opportunity is on the increase, the need for change is clear.

Mountain-Plains curriculum is clearly defined. For example, Family Core is composed of four major life skills areas: Health Education, Consumer Education, Home Management and Parent Involvement. Instruction in these four areas helps students to cope with the everyday problems related to health, finances, children and family life. Classroom instruction in Family Core, which is required of all students, lasts approximately four weeks. During this time each student studies general principles and practices related to the following:

1. Health Education

    - Health Information
    - First Aid
    - Major Health Problems
    - Home Care of the Ill
    - Family Life Education
    - Dental Hygiene

2. Home Management

    - Understanding Nutrition and Your Health
    - Grooming and Impressions
    - Clothing and Dress
    - Home Care and Utilization

3. Consumer Education

    - Managing Your Money
    - A Place to Live
    - Car Buying
    - Shopping With Credit
    - Consumer Awareness
    - Insurance

4. Parent Involvement

   - Interaction with Children
   - Infant and Preschool Child
   - Middle Age Child
   - Adolescence.

Individual consultation in Family Core is offered to each student throughout his or her stay at Mountain-Plains. Individuals may meet with an instructor on a one-to-one basis to more completely discuss topics or problems of special concern to the student. Personal consultation frequently covers--

1. Health Education

   - Infant Health Care
   - Treatment of Common Illnesses
   - Understanding the Directives and Comments of Medical Professionals
   - Medical Referral Opportunities

2. Home Management

   - Grooming
   - Weight Problems
   - Food Preparation
   - Management of Home Life

3. Consumer Education

   - Budgeting
   - Payment of Debts
   - Consumer Problem Solving
   - Legal Hassles

4. Parent Involvement

   - Behavioral Problems
   - Education in the Home
   - Parent-Child Relationships
   - Single Parent Problems

Mountain-Plains LAPs are consistent in format. Each has the following components:

- Objective
- Evaluation Procedure

- Resources
- Procedure

Each LAP has a designated file code and date published. An example of a Learning Activity Package cover page is presented on page 25.

Efforts and Results

Students' performance on terminal objectives is measured through both cognitive and performance tests. Performance tests are used to determine validation (i.e., mastery) of objectives. Cognitive tests, which measure a students knowledge of a subject area, are usually used only to pinpoint areas of weakness to help guide further study.

Individual evaluation is virtually continuous. Job title pretests assess mastery of all objectives from the lowest level to the job title level in a single testing session. Such testing is strictly diagnostic, designed to determine how much of the curriculum a student has already mastered. As in any individualized program, cognitive and/or performance tests are administered as a student completes each LAP. Job-title posttesting follows the same procedures as pretesting but its purpose is summative evaluation of the student's acquisition and retention of skills. This procedure is repeated for each student in the job title or curriculum area of interest, and the entire process is known as curriculum area evaluation. Individual students' performances are categorized according to mastery or nonmastery of job title objectives. Those data, considered in conjunction with evaluation of the objectives themselves, number of instructional hours spent in the area and cost per hour, provide an objective statement regarding the overall merit of the curriculum area. Programs having measurable, relevant objectives, high student mastery rates, and relatively low cost per instructional hour are considered to have the most merit. Curriculum evaluation takes place on at least four levels: student evaluation of curriculum materials, employer evaluation of exited students, third-party content validation, and internal review of curriculum objectives.[10]

Program Studies indicate that Mountain-Plains' students do make strong gains in such core personal dimensions as the acceptance of self and others; reliance upon personal judgment; ability to focus on the task at hand; and increased ability to enjoy interpersonal relationships. Additionally, Mountain-Plains' graduates rank well above the national average on work satisfaction as measured by the job descriptive index, and on all dimensions of satisfactoriness as rated by employers on the Minnesota Satisfactoriness Scales.

It is Mountain-Plains' experience that an individualized curriculum seems to be a useful strategy in relieving the alienation and

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Glasgow AFB, Montana 59231

SAMPLE

File Code: 46.01.04.03.A2-0

Date Published: 11/14/74

Learning Activity Package

Student: ____________________

Date: ____________________

PERFORMANCE ACTIVITY: Aptitudes

OBJECTIVE:

Identify your abilities and their relationship to selecting a career.

EVALUATION PROCEDURE:

The results of your General Aptitude Test Battery will be discussed with your Career Guidance Specialist. A cognitive test will be administered upon completion of the course.

RESOURCES:

Staff-prepared LAP.
GATB Profile, United States Department of Labor, Manpower Administration, Washington, D.C.

PROCEDURE:

1. Read and study the written sheet attached to this LAP.
2. Locate the nine aptitude scores on your GATB Profile and transfer your scores onto the attached form.
3. Compare your scores against the scoring ranges for each aptitude test and indicate in the space provided whether your score is weak, average or strong when compared to the General Working Population.
4. List your three (3) strongest aptitudes (highest scores) and your three (3) weakest aptitudes (lowest scores) in the spaces provided at the bottom of the attached form.
5. On the back of the attached form, enter the name of the training area you are considering and answer the questions listed.
6. Show the completed LAP to your Career Guidance Specialist for evaluation and discussion.

Principal Author(s): Garner, Manley, Currie discontent of disadvantaged families. It seems likely that these families will more readily support a curriculum which treats them like people, rather than objects within the system. It also seems likely that disadvantaged families will more readily support a curriculum planned with and for them--one which is subject to modification as their needs change.

Mountain-Plains curriculum is highly flexible. It is individualized to the extent that each learner is encouraged to plan, direct and assess his or her own career education. The model--

1. Emphasizes learning goals.
2. Provides variable entry and exit.
3. Continually assesses student performance.
4. Diagnoses learner characteristics.
5. Helps students complete learning tasks.
6. Directs student activities.
7. Employs teamwork.
8. Interfaces social learning skills.

The curriculum focuses on academic skills needed for successful job performance. Essential job competencies are identified through interviews with employers, and incorporated into the program for each occupation. It appears that students more readily assimilate skills when they perceive the relevance of those skills to on-the-job performance. It is Mountain-Plains' experience that individualized curriculum encourages frequent interaction between student and instructor. This personal communication is supplemented by audiovisual instruction through films, tapes, readings and so on. The individualized Mountain-Plains' learning curriculum offers the learner--

- Active, rather than passive, participation.
- The opportunity to select what he or she will learn and what learning approach will be used.
- Immediate knowledge of results and opportunity to improve performance in accordance with publicly specified criteria.
- The opportunity to experience success.
- The opportunity to work at his or her own pace.

These factors seem to enhance learning and the ability to apply what has been learned.

Efforts at curriculum management have been rigorous. Classrooms are periodically monitored to ensure correct use of curriculum, with special instruction offered as needed. The testing program and the curriculum are closely coordinated, and function interdependently, with tests providing a means of placing and validating students within the curriculum. Instructors who use and understand the system find that it releases them from trivial tasks and allows them to perform the professional function of a curriculum manager, and resource and guidance person.[11]

LESSONS LEARNED FROM THE MOUNTAIN-PLAINS EXPERIENCE

The lessons learned from the Mountain-Plains experience in connection with curriculum development are discussed here in relation to five elements: tradition, innovative developments, theoretical literature, issues, and policy questions.

Tradition

Management of Curriculum Development and Implementation

Traditionally, curriculum development and implementation are guided by administrative directive, with instructors and other staff providing input only as requested. It appears, for Mountain-Plains' purposes, that a practical, participatory approach to curriculum development, in which data based decision making plays a key role, is more effective.

Instructional Mode

"Mass" instruction, in which everyone is expected to learn the same thing at the same time in the same way, is part of our educational tradition. Mountain-Plains employs an individualized approach in which the student progresses through a personalized curriculum at his or her own rate. The fact that there are approximately 200 families onsite at any given time has vast implications for the administration of such a system. Recordkeeping within an individualized program is extremely complex and demands not only sophisticated technology but also the complete understanding and support of all staff. Mountain-Plains maintains that the extra effort required to operate such a recordkeeping system is more than offset by the personal benefits to students who have access to individualized instruction.

Context of Work

Traditional instructional approaches are concerned with the student in the classroom, quite apart from his or her personal life. Mountain-Plains views the family as a supportive influence on the student's life, and takes advantage of that potential to offer support by directing education and consultation to the family as a whole--not just the individual student. It is Mountain-Plains' philosophy that the individual who is part of a family unit cannot succeed in isolation. Individuals who experience personal success only to return to a setting (e.g., the family) in which no parallel change has occurred, seem likely either to regress to their former state or to divorce themselves from that setting in order to avoid regression.

Mastery Learning

Traditional practice often emphasizes time spent in the classroom and length of exposure to content. An individualized approach, like that used at Mountain-Plains, focuses on student mastery of competencies as demonstrated through performance. The length of time spent on any given instructional unit is a variable, dependent on the student's present level of attainment and his or her potential for improvement.

Program Change

In the past--and to some extent even now--educational institutions have attempted to make programmatic changes through a vertical communications system in which decisions "trickle down" while suggestions are "filtered up." Mountain-Plains endeavors to make the change process more efficient through a planned approach in which suggestions are regularly sought and discussed. The system is characterized by open communication within and among all levels, and by a predisposition to change which assumes the need for periodic review and modification of all procedures or policies.

Educational Philosophies

Traditionally, educational philosophies pronounce what schools will teach. In an individualized flexible program like Mountain-Plains, curriculum is dependent largely on program goals (e.g., in this case employability and improved life style) which, in turn, prescribe specific desired outcomes related to personal and academic attainment.

Learning Patterns

In traditional institutions, content and the time allotted to students to master that content are fixed. Only the degree of competence that each student attains by the end of the prescribed time is a variable. In an individualized program, like Mountain-Plains, the minimum level of competency that each student will attain is fixed. Time and content are the variables, with students progressing at their own rates, studying only what performance tests show they have not yet mastered. Within this system there are no grades; attainment of specified behavioral objectives must be demonstrated through performance. Great flexibility is given students in selecting a learning approach and managing their own curriculum.

Staff Supervision

Traditionally, directives to instructional staff on what is to be done are accompanied by directives on how to get it done. An individualized program like Mountain-Plains, however, seems to demand greater flexibility in guiding students through curriculum and performing related functions. For example, various instructional approaches--group discussion, personal consultation, audiovisual presentation--may succeed in one situation, but not in another. Mountain-Plains feels it is important that instructors have the latitude to employ a variety of methods--even to modify methods--according to students' needs, interests and abilities.

Innovative Developments

It is important to understand that the "innovations" discussed here are not really new at all. Many have been employed in a wide range of settings with varying degrees of success. These approaches are innovative at Mountain-Plains in the sense that for the first time they are being implemented within the context of an adult residential career education program designed to serve a rural disadvantaged population.

Teaching Approaches

The team teaching concept as employed at Mountain-Plains is more accurately described as integrated learning using specialized instructors.

Student Programming

Flexible scheduling, an educational innovation of the '60s, permits some latitude in individual student programming but is essentially used in scheduling of student groups. At Mountain-Plains, individual schedules vary so that a student may or may not be involved with other group members.

Institutional Schedules

The 12-month or year-round school concept emerging in the late '60s and early '70s offers some benefits to students, but does not really permit increased flexibility in student progress through the curriculum. The open entry/open exit approach, which Mountain-Plains favors, maximizes the accessibility and convenience of the educational program for the student.

Theoretical Literature

Following are some highlights of Mountain-Plains' experience which are expected to contribute to extant theoretical literature.

Management

The Mountain-Plains' experience suggests that a synthesis of various, broad based, rational (goal-oriented) management techniques are more effective in achieving program objectives than a power-based form of governance.

Accountability

Mountain-Plains' experience indicates that accountability is increased when student attendance and progressions are closely monitored, and both instructor and student are held responsible for students' attainment of behavioral objectives.

"Hands-On" Learning

Mountain-Plains' experience corroborates the theory that "doing" reinforces learning. At Mountain-Plains, demonstration of knowledge through cognitive tests is not considered adequate for attainment of most objectives. While the importance of cognitive learning is not ignored, the emphasis is on demonstrated competency through practical performance of tasks.

Relevancy

Mountain-Plains documentation contains considerable evidence to corroborate the claim that students are more highly motivated when they perceive learning activities as relevant to their career goals. Therefore all skills taught within the Mountain-Plains curriculum are directly related to competencies needed on the job.

Positive Reinforcement

Mountain-Plains' experience upholds the theory that constant, positive reinforcement couched in terms of students' own abilities and learning rates enhances learning more effectively than pressuring students toward some kind of group norm.

Issues

A number of theoretical and methodological issues receive some new culmination as a result of the Mountain-Plains' experience. Some of those issues are touched upon here.

Theoretical Issues

Would a student learn more efficiently without the distraction of family and community responsibilities? The Mountain-Plains' experience would indicate that the answer is no. In fact, it would seem that any potential distraction is more than compensated for by the beneficial reinforcement of the family, and by the opportunity to apply what has been learned in the course of discharging family and community responsibilities.

Will self-paced learning allow some students to complete too narrow a curriculum too quickly without peripheral or indepth learning? Yes, that possibility is inherent in the self-paced learning concept which requires, as Mountain-Plains staff have learned, constant monitoring of each student's progress vis-a-vis his or her learning potential. When a student is observed not challenging objectives commensurate with his or her ability, instructors and advisors have a responsibility to encourage that student to progress to the maximum limit that his or her potential will allow.

Shouldn't education be an end in itself rather than a means for satisfying societal needs, including providing trained persons to fill occupations? Mountain-Plains' two main goals for students--employability and life satisfaction--are based essentially on what is important to the students themselves; that is, these goals are not superimposed, but reflect the desires of the rural disadvantaged population Mountain-Plains serves. This suggests that education is important as a means to goal fulfillment (e.g., employment), and that it therefore satisfies society's needs by satisfying the needs of its individual members.

Is it really the function of educational administrators to be involved in curriculum and instruction? The Mountain-Plains staff feel that it is. Inadequate management and insufficient attention to the needs of students and staff can result if the administration is not intimately and systematically involved in curriculum development and implementation.

Methodological

Are there some instructors who should not be involved in curriculum development? It is Mountain-Plains' conviction that given sufficient in-service training and competent assistance from curriculum specialists, nearly any instructor can produce usable curriculum materials and procedures. Moreover, the involvement of all staff helps ensure commitment to the individualized approach and the valuable input of persons with practical experience in each field.

Policy Questions

Should all education programs be partly developmental and partly operational? Mountain-Plains' staff say Yes, to keep an educational program vital and capable of meeting students' needs it is essential that conscious provision be made for developmental activities. Mountain-Plains provides a system for staff input for programmatic changes. Mountain-Plains staff are fearful of becoming operationally "routinized" because of the potential apathy and listlessness that attends such routine.

Is public education responsible for the student only as a learner--rather than as a family member, citizen, producer, leisure-time user? Mountain-Plains' experience suggests that the answer is no. A curriculum which fails to incorporate skills relevant to these various life roles has only limited usefulness for the learner. It is an inherent part of Mountain-Plains' philosophy that learning takes place within virtually every aspect of an individual's life, and that attempting to relegate it to a classroom setting creates an artificial distinction that diminishes total program effectiveness.

Shouldn't education emphasize maintenance and/or further development of students' learning levels rather than remediation? Attempting to establish a universal policy relative to this question might be inconsistent with Mountain-Plains' view of individualization. Some students--particularly educationally disadvantaged students--lack the necessary training in intellectual processes to be considered "functionally literate," and are thus penalized in their associations with others.

SUMMARY

The curriculum operates as an intent-feedback model. Each instructional module, each component, functions within the demands of this concept. This curriculum model is capable of accommodating many continual changes expressed in terms of purposes or objectives (intent), courses of action (action), and assessment and evaluation of outcomes (feedback). The process dimension of the curriculum demands that it modify its intent, action and feedback processes on the basis of its own experience. The model also has the capability of modifying itself through the experiences of students and instructors--an essential ingredient in serving the unique needs of the Mountain-Plains target population.[12]

The average Mountain-Plains' student is 26 years of age, dropped out of school in the 11th grade, reads at the 8th grade level, and does math at an 8th grade level. Only a fourth of all entering students have had any formal instructional vocational training and, for those who did, the training was minimal. Over 60 percent of the population entering Mountain-Plains are at or below the poverty level as defined by the U.S. Office of Economic Opportunity.

On psychological tests, Mountain-Plains' students score an average of one standard deviation below norm on such known correlates of successful social, vocational, and family functioning as inner directedness, time competence, and self-concept. On psychological tests recording clinical variables, Mountain-Plains' students score as more "neurotic" than the general population.

The Mountain-Plains target population can be characterized as a disadvantaged population with a history of unemployment or underemployment, needing assistance to break their dependence upon societal support. Mountain-Plains responds to the needs of this target population by emphasizing individualized instruction, using criterion reference tests, and practicing a human development philosophy based on helping the students develop their assets and eliminate their deficiencies. The curriculum is based on the realities of the current job market, and operates in a controlled environment.[13]

Many programs are currently experimenting with an academic/vocational social learning system, but few have employed the concept to as full an extent as Mountain-Plains. The Mountain-Plains' curriculum emphasizes development in totally systematic terms. All aspects of the student's life are diagnosed and treated. The curriculum is open and flexible, for ongoing, interactive, adaptive and regenerating processes. It is assumed that each part of a student's existence inevitably affects all others. Acquiring occupational skills therefore requires corresponding changes in social and family living skills. Recognition of the complex interplay between various types of skills, and the provision of an environment in which all types of skills can be learned, together make Mountain-Plains unique. It is unlikely that an arbitrary or limited approach to skill development could ever achieve more than minimal success in meeting the challenge of total rehabilitation.

Predicting the future roles and functions of educational training institutions is admittedly difficult. However, the Mountain-Plains' curriculum experience suggests the following trends:

1. The curriculum models will be individualized and the learning approach personalized.
2. The curriculum will encompass all members of the family and provide a supportive environment in which they can apply their newly learned skills.
3. Learning opportunities will extend beyond the school, occuring in a variety of settings with opportunity for feedback and self-correction.
4. The learner will accept responsibility for his or her education and accountability for decisions.
5. The amount of face-to-face interaction in the formal learning process will be minimal, with major personal, social input on relevant competency-based performance activities.
6. Public education will increasingly incorporate vocationally based experiences into its curriculum. The Mountain-Plains' model provides empirically-based modules in many occupational areas.

Education and training, unfortunately, have always tended to depend more on contrivance than upon design. For this reason, craftsmanship, rather than technology and science, has been emphasized in curriculum development. Times are changing, however. The Mountain-Plains curriculum is an example of how systems technology and the principles of behavioral science can be applied to the learning of vocational and social competence.

In changing times, unchanging educational institutions are anomalous. The competency-based Mountain-Plains' curriculum suggests an alternative to meet the challenges of a changing society. The emphasis upon objectives, accountability, personalization and total family rehabilitation is a harbinger of our educational future. For years learning has been ideally defined as both individually based and performance oriented. Yet, performance oriented and goal based learning have been largely unattainable in our educational institutions because of the demand for mass education and reliance upon the omnipotent role of a teacher. Ironically, the casualties of this system are those for whom the system was designed: the disadvantaged. A program like Mountain-Plains, with new insights on curriculum and materials, can open a new world of opportunity for the disadvantaged.

CHAPTER III

EVALUATION

CHAPTER III
EVALUATION

INTRODUCTION

Goal

Mountain-Plains has four major goals:

- To design and implement an educational model
- To research and evaluate the effects of the model
- To provide guides, methods and procedures, research reports, cost analyses, and curriculum with potential application in other educational settings
- To provide career education for a significant number of rural disadvantaged families within the six-state region.[14]

By intent Mountain-Plains is a comprehensive educational model designed to combine concepts from social theory, adult education, individualized instruction, criterion referenced attainment, and career education in order to produce a self-contained educational delivery system responsive to complex cognitive and affective needs. The scope of this program, with its traditional educational components approached in nontraditional ways, demands an evaluation of similar comprehensiveness.

Initially, evaluation of Mountain-Plains was limited to traditional education and manpower methods. The process was constantly frustrating, with attempts to apply textbook schemes to gain a broader perspective from persons who were not educational researchers *per se*, and to integrate various theoretical and methodological perspectives.[15] The approach ultimately derived can be described as an *interdisciplinary, multi-methodological approach to evaluation of a social action program*.

Purpose of the Chapter

The evaluation procedures used to examine the scope and intent of the Mountain-Plains program are the subjects of this chapter. The discussion will first cover the conceptual boundaries of evaluation, then focus on the Mountain-Plains experience in light of tradition, innovative developments, theoretical literature, issues and policy questions. A summary will be presented at the end of the chapter.

Relationship of the Topic to the Monograph

The relationship between evaluation and the total monograph is capsulized in the mission of the Research Services Division of Mountain-Plains:

1. To conduct summative evaluation of internal and external program effects for funding agency reporting, program documentation and reporting to the Board of Directors and the community at large

2. To conduct formative evaluation of program effects to serve as a basis for management reports and recommendations concerning program alterations

3. To conduct special evaluation or research projects, as requested by management or the Board of Directors

4. To serve other program components in such areas as special analysis of placement success by individual occupations, maintenance of student master files, design and implementation of curriculum (including test construction, and validation of both tests and curriculum), design and implementation of progress assessment systems, maintenance and operation of the Data Monitor's office and maintenance and operation of the Test Center.

During program development, Research Services was responsible for developing and implementing a better research/evaluation design, as well as helping to develop a process systems design, defining terminal performance objectives, and specifying evaluation criteria.

Significance for Research and Development

The significance of Mountain-Plains for research and development can be described in terms of some of the program's major features:

1. The Mountain-Plains program is the central feature of the nationally prominent career education movement serving two main functions: service and research and development. In its service function, Mountain-Plains provides vocational rehabilitation for unemployed heads of households in a six-state region. In its research and development function, the program

provides a generalizable model for residential career education that represents one alternative in NIE's general career education program.

2. Mountain-Plains was created in response to the local needs of rural disadvantaged families, and to a growing national interest in career education programs.

3. Implementation of Mountain-Plains cost the taxpayers $20 million; hence the strong public concern regarding its effectiveness.

4. Though termed "a model program," Mountain-Plains is operating an untried, innovative approach which has guarded itself against the influence of political groups and the bias of premature public judgment.

5. Mountain-Plains has the capability to conduct the internal evaluation necessary to meet needs of such an innovative program. Substantial funds have been devoted to support the Research Services Division and a Controller's Services Division which in combination are essentially responsible for internal evaluation. Research Services has primary responsibility for evaluation; Controller's Services complements this function by providing financial data through the Accounting component, and student attendance data through the Student Scheduling, Attendance and Data Collection component. Additional funds are allocated for followup studies of Mountain-Plains graduates, and other external evaluation work contracted with various evaluation agencies and individuals. The federal government has also devoted considerable resources to coordination of the evaluation efforts and to monitoring the Mountain-Plains program.[16]

CONCEPTUAL BOUNDARIES

The Broader Meaning and Significance of the Subject

Evaluation and Research are often differentiated by assuming a task/problem focus for the former, and a theory/knowledge focus for the latter. By definition, research is theoretical and evaluation atheoretical. Research outcomes typically have consequences for abstractions and can await the test of time. Evaluation outcomes are usually undertaken to permit informed decision making, and thus have rather immediate consequences for institutions and persons. Finally, the scientific researcher is able to define and control the objects and processes studied. The evaluator, on the other hand, usually cannot do this. Furthermore, the researcher is usually an expert in the field he or she explores. The evaluator must often rely on the content expertise of others. Given these distinctions, the data gathering and reporting of Mountain-Plains fall mainly into the evaluation category. The design, implementation, and revision of of a comprehensive evaluation paradigm for this complex program have relevance for the larger field of research, and specifically for integrated research and evaluation.[17]

Boundaries for Analyzing the Subject

The conceptual perspectives inherent in the general evaluation discussions, and the Mountain-Plains specific discussions which follow, can be summarized in terms of the following seven premises:

1. Evaluation is the assessment of merit. It should reflect all the questions that concern the merit of a program, not limit itself to outcomes that pertain to specified program objectives.

2. Evaluation should serve both formative and summative purposes. Formative evaluation should be conducted proactively to assist decision makers in improving and successfully conducting their program. Summative evaluation should result in an up-to-date, readily accessible data file that demonstrates the program's merits and helps ensure accountability.

3. Evaluation should address questions pertaining to goals, designs, implementation, and results. Formative evaluation should assist decision makers in choosing goals, identifying and choosing among alternative designs for achieving the goals, carrying out their designs, and producing positive results. Summative evaluation should assist program personnel in identifying the rationale for selected goals and specifying the extent to which those goals respond to the needs of the target population; demonstrating the alternative procedural designs considered, and the rationale behind choosing one; documenting the extent to which the selected design was carried out; and demonstrating the full range of effects.

4. Evaluation should serve all audiences interested in the program being assessed. Participants, instructors, managers, and program sponsors are interested in different questions and require different amounts and kinds of information. The evaluation design must be sensitive

to the informational needs of these different audiences, and be capable of producing and disseminating a variety of reports to meet those needs.

5. Evaluation should be conducted by internal and external agents. An inhouse evaluation group can be very effective in providing program personnel with ongoing formative evaluation. On the other hand, external evaluators are more likely to be viewed as objective and credible by external audiences.

6. The process of evaluation includes three basic stages: delineating, obtaining, and applying evaluation data. Delineating pertains to the focusing of evaluation activities. Obtaining involves conducting all the technical activities required to gather needed information. Finally, evaluators and their audiences collaborate in applying the data to pertinent decisions and accountability questions.

7. Evaluation should be technically adequate, useful, and cost effective. An evaluation design should follow sound principles of data gathering and analysis, demonstrating concern for the timeliness, relevance and comprehensiveness of data. Evaluation should be conducted at a prudent level so that its cost cannot jeopardize the overall system effort.[18]

THE MOUNTAIN-PLAINS EXPERIENCE

Objectives

Determining the Purpose of Evaluation: General Discussion

Evaluation studies generally have practical applications. While the conduct of research is usually justified by an attempt to obtain new knowledge--which may or may not have immediate applications--an investment of resources in evaluation must be justified by some kind of practical purpose beyond the acquisition of new knowledge. Determining the purposes of evaluation is not only a crucial factor in resource allocation, but also important to the design and implementation of that evaluation. The Mountain-Plains experience strengthens the conviction that many evaluations could have been more effective had they been preceded by a clarification of purposes, rather than hasty adoption of available evaluation methods and instruments.

The distinction between formative and summative evaluation provides an important basis for identifying the purposes to be served by evaluation. Formative evaluation is conducted prior to and during development to improve an educational product; summative evaluation is conducted after development to the utility of the final product. There may be some concern about whether the categories formative and summative can permit an exhaustive classification of all the possible purposes evaluation might serve. Although no attempt will be made here to provide comprehensive definitions for formative and summative evaluation, an attempt will be made to suggest which might be included under the two broad categories--formative and summative--and to point out some additional purposes that might not fit under either category. Evaluators should find such categorization useful.

Formative evaluation comprises at least three specific purposes. First is diagnosis. Regarding the individual student, diagnostic evaluation is intended either to place the student at the appropriate level of instruction or to identify weaknesses so that remedial action can be taken. Regarding programs or organizations, diagnostic evaluation is intended to identify needs, opportunities, and resources, and to assist in the establishment of operational goals and objectives. Diagnostic evaluation is conducted at the outset of an education program and--on a smaller scale--throughout its implementation.

The second purpose within the formative category is the improvement of products, activities, ideas, or plans. Individuals or institutions considering revision on any level might benefit from the feedback provided by evaluation.

A third purpose served by formative evaluation is process control. In fulfilling this purpose, evaluation must provide ongoing feedback to persons in charge of simple or complex operations, and interested in the effectiveness of operations for which they are responsible. This continuous evaluation serves management by identifying deficiencies and providing a rational basis for administrative decision making. Whether facilitating improvement or process control, the purpose of evaluation is not to prove the merit of an educational object, but to improve or maintain its quality. At the same time, there are two basic differences between these purposes. First, process control demands continuous evaluation to assure the ongoing quality of the operation and to signal unanticipated problems. In effecting improvements, continuous evaluation might not be cost effective since revisions can be introduced only at certain points within the developmental process. Ongoing evaluation might even be harmful if it interferes with the spontaneity of the developer's "trial and error" process. Second, process control is best achieved through a balance between positive and negative feedback.

Improvement, on the other hand, is more readily effected by focusing on deficiencies; advantages--in relation to this purpose--are largely irrelevant.

The purpose of providing accountability falls under summative evaluation. Evaluation designed to measure accountability is based on two major assumptions. First, it is assumed that the object of evaluation has been provided with certain resources and that it must be accountable for using those resources according to appropriate criteria. Second, it is assumed that some rewards or sanctions will be applied according to how well such criteria are met. Evaluation examines the degree to which criteria are met and thereby indicates what rewards or sanctions should be provided.

A second purpose under summative evaluation is demonstration. No accountability requirement necessarily exists in relation to this purpose. Usually, persons involved in some educational activity are interested in demonstrating the quality of their work, but lack the "hard evidence" to convince others of that quality. Rigorous, systematic evaluation is required to provide convincing evidence. It should be conducted by an independent evaluator who, although commissioned by the organization, will generally be regarded by outsiders as objective. Evaluation for demonstration purposes should be conducted only when an organization feels fully prepared to demonstrate its accomplishments.

A third purpose under summative evaluation is certification. Students seeking professional diplomas or academic degrees, and educational institutions seeking accreditation often seek such evaluation. It is conducted by an authorized agency at the request of the individual or organization seeking certification and according to the standards of the certifying agency. The evaluator makes the assessment of merit; the individual or organization being evaluated is responsible for providing evidence on which the assessment will be based.

At least two other purposes--not included within the formative or summative categories--can be served by evaluation. First, evaluation is used for public relations. Public education is supported by taxpayers; the public, therefore, has a right to know what goes on in its educational institutions. Moral and financial support for education can be obtained by informing the community of the accomplishments and problems of educational institutions.

Second, even when it is obvious that no actual use has been made of evaluation results, it might still be serving one purpose: motivation. Although at present no evidence is available to demonstrate the effectiveness of evaluation in serving this purpose, many administrators believe evaluation could have a significant impact on the motivation of individuals and educational organizations. The overwhelming accumulation of unused evaluation reports suggests that motivation through threat of disclosure is often the only purpose evaluation serves or was intended to serve.

To summarize, the following purposes can be served by various types of evaluation.

Formative Purposes

- Diagnosis
- Improvement
- Process Control

Summative Purposes

- Accountability
- Demonstration
- Certification

Other Purposes

- Public Relations
- Motivation

Development of an evaluation system for a social action program must start with specification of the purpose(s) that evaluation is intended to serve. The structure of the evaluation system is largely dependent on the nature of those purposes.[19]

The Purpose and Objectives of Evaluation at Mountain-Plains

On a general level, the needs of Mountain-Plains' target population were known. Low income, personal and family difficulties, emotional instability, and little formal education were defining characteristics. Such general knowledge, however, proved an insufficient basis upon which to develop adequate program components and evaluation. Only after students began to arrive did enough specific data become available to conduct program evaluation with confidence. These data included 1) group norms on psycho-social variables, 2) pretest scores on self-developed or acquired curriculum, and 3) direct comments by staff and students--comments which often provided the insight necessary to properly interpret standard measure.

Program evaluation needs, which were largely unanticipated by the original executors of the project planning grant, gradually emerged. Staff wanted more focused affective development components, better testing, a more controlled means of assessing staff competency, and a general reconceptualization of evaluation that would go beyond the usual content testing and collection of standard income and related sociodemographic data. As data accrued, formative evaluation was conducted to measure the appropriateness of components and objectives, and the attainment of product objectives by components was analyzed. Subsequent adjustments included test revision, curriculum modification, initiation of performance tests, revision of foundation education requirements for job titles, increased focus on affective measurement, and development of selection criteria to coordinate student admission to the program.

Mountain-Plains' two basic goals, employability and life satisfaction, represent extremely complex concepts that must be assessed on many levels, from many points of view. Mountain-Plains' program evaluation must go beyond the simplistic question Does it work? to a more detailed analysis of internal and external interactions. It is important to ask, For which individuals does this particular program component work? To what extent does it work? How much does it cost? Is it a beneficial public investment?

To facilitate evaluation, employability and life satisfaction are defined in terms of more specific goals. Employability, for example, is defined in terms of work habits, competence in mathematical and verbal skills, increased earning power, work satisfaction, career sophistication, and personal and social maturity. Life satisfaction is redefined as inter- and intrapersonal facility, economic security, adequate family functioning, survival skills, enjoyment of work, and social integration. These goal definitions are by no means exhaustive, and areas of overlap are apparent. For instance, economic security, though defined as a measure of life satisfaction, is logically dependent on employability. Enjoyment of work depends not only on adequate vocational training but on successful adjustment to life. Methods for evaluating program success must therefore take into account the interrelationships among program goals. This acknowledgement of interrelationships is the core of comprehensive evaluation.[20]

Organization and Functions

Developing an Evaluation Plan: General Discussion

Once the purposes of evaluation have been determined, an evaluation plan capable of fulfilling those purposes must be developed. Given the dependency of any evaluation plan on the purposes to be served and the resources available, no single design can offer a general solution for the evaluation of all social action programs. Each program demands an individual plan. Nevertheless, the following considerations are generalizable to most situations.

Selection of evaluation variables. Classical evaluations have addressed questions about educational outcomes. This is certainly one important focus for evaluation work, but it is only one. Evaluation may also assess the merit of goals, of designs for achieving those goals, or of efforts to implement the designs. Thus, four main classes of variables may be addressed by program evaluation: those relating to program goals, designs, processes, and results. Each of these categories includes specific variables, which differ depending on whether the purpose is to serve decision making or accountability. (Of course they also vary depending on the nature of the object; e.g., a program versus a book and its content or mathematics versus art.)

The matrix in Figure 1 depicts the relationship between the two major categories of evaluation purposes and classes of variables. This matrix is designed to help identify specific variables to be measured.

The cell that relates goals to formative purposes denotes variables concerning the needs of people to be served, problems that must be solved in order to meet these needs, and opportunities (e.g., funding) that might be utilized in solving problems and meeting needs.

The cell that relates goals to summative evaluation denotes variables concerning what goals were chosen, whether they were clearly formulated, and whether their choice was justified. If decision makers have done a good job of obtaining information about the people to be served, their needs, opportunities for responding to their needs, and problems to be resolved; if they have used this information to formulate objectives; and if they have recorded and filed this information, they are in a good position to defend their choice of goals.

In the cell that relates design to formative evaluation, the variables concern selection of a plan for achieving the given objectives. Alternative plans might vary as to procedure, staffing, schedule, facilities, budget, and potential impact on the chosen goals. The formative evaluator's job is to ensure that the decision maker considers the merits of all alternative plans. This type of evaluation often assists career educators seeking financial support for their programs; by illustrating the relative costs and benefits of different program plans they can generally make a strong case for the one they prefer.

In serving summative purposes, the evaluation of designs addresses three main questions: What design was approved? What alternative designs were considered? Why was the winning design chosen? If those accountable have used formative evaluation in selecting their design, they should feel comfortable in responding to these questions.

Next, consider the third column of the matrix pertaining to process or the actual implementation of the chosen design. In the decision making mode (formative column), process variables concern whether the design is being properly implemented. Are there flaws in the design? Have staff been adequately oriented and trained? Are they supportive of the goals and design? Do they know how to carry out their assignments? Are they experiencing particular procedural problems? Is the work being completed on schedule?

Purpose of Evaluation	Classes of Variables			
	Goal-Related Variables	Design-Related Variables	Process-Related Variables	Product Variable
FORMATIVE	Assesses needs, problems, and opportunities to assist in forming objectives.	Identifies and assesses alternative plans that might be chosen to achieve selected objectives.	Assesses progress in implementing a chosen design as a means to process control.	Assesses attainments during implementation as a means to quality control.
SUMMATIVE	Assists in reporting and defending chosen objective against others that might have been chosen.	Assists in reporting and defending a chosen activity plan against alternatives that might have been chosen.	Assists in reporting and defending the actual process and interpreting outcomes.	Assists in reporting all outcomes.

Figure 1

The Relationship Between Evaluation Purposes and Variables

Measurement of process variables is also a crucial accountability consideration (summative column). In judging the merit of a design under operating conditions, it is not enough to know the results. One must also know to what extent the design was carried out, and what modifications--if any--had to be made. This information is important in interpreting results, since failure to achieve objectives may be attributable to a failure to implement the chosen design, rather than to flaws in the design itself. A record of the process is useful for informing others who may want to implement the design about problems encountered and necessary modifications. And program sponsors understandably want to know whether funds were used as intended.

The final column in Figure 1 concerns outcomes--unintended and intended, primary and secondary, and positive as well as negative.

In relation to decision making (formative column), managers are faced with recycling decisions. Is the effort worth continuation? Should it be modified or maintained as is? Should it be expanded to other settings? These decisions require more than assessment of goals, designs and processes; information about achievement is also needed.

Throughout the implementation process decision makers need pertinent outcome data. Are the goals being achieved? Are the needs being met? Are the opportunities being used? Are the problems being solved? Are there important side effects that argue for or against the effort? Are the results worth what they are costing? Data that can help answer these questions are vital to the decision maker during implementation, since feedback concerning results increases the likelihood that something valuable will be produced. Of course, the decision maker must also guard against premature judgment regarding effectiveness.

The final cell in the matrix relates product to summative evaluation. This cell calls for a long-term accumulation and assessment of program results. All outcome data should be considered in judging program cost effectiveness, and overall merit. It is appropriate to relate all outcome data to the accountability data pertaining to goals, design, and process. In fact, such a synthesis is necessary in judging the overall merit of the effort.

The investigatory framework. A second consideration concerns what investigatory framework should guide the evaluation. An investigatory framework specifies the conditions under which data are to be gathered and reported, and the assumptions to be made in interpreting the findings. In all evaluation studies evaluators must choose either implicitly or explicitly among a number of alternatives investigatory frameworks, e.g., experimental design, survey, case study, and site visitation.

No one investigatory framework is the most technically adequate, useful and efficient in all cases. The appropriateness of various investigatory frameworks depends on the evaluation purposes to be served, the priorities assigned to different criteria for judging evaluation reports, and the unique conditions under which an evaluation is to be conducted. The challenge lies in choosing the framework that will provide the most useful results under realistic constraints.

Though true experimental design is theoretically the best way of determining cause and effect relationships (through its provisions for internal and external validity), sometimes it is not feasible to conduct true experiments because one cannot control treatment variables or the assignment of experimental units to the treatment conditions. For example, one would not use experimentation to assess the effects of Sputnik I on subsequent U.S. educational policy. Neither would one say that it is inappropriate to make post hoc evaluative interpretations about such linkages. Also, regarding matters of relevance, scope, and timelines, experimental design often does not assess the right variables or provide timely feedback for decision making. This is especially true in conducting needs assessments to assist in formulating goals, or conducting process evaluations to assist in project implementation. Experimental design should be used only when it addresses questions of interest and when it is practicable.

The literature presents a number of valuable alternative to experimental design. Campbell and Stanley[21] have discussed quasi-experimental design. O'Keefe[22] has suggested a comprehensive methodology for field-based case studies. Scriven[23] has introduced "Goal-Free Evaluation" and more recently "Modus Operandi Analysis.[24] Reinhard[25] has explained "Advocate Team Methodology," and Wolf[26] has explicated the "advocacy-adversary" model. Thus, evaluators are not bound to use any single investigatory framework.

Instrumentation. Considering the purposes of the study, which of the available data gathering instruments and techniques--if any--are appropriate? Must instruments be specifically developed to serve the purpose of this study? Is it feasible to develop new instruments? If it is, what sacrifices will have to be made regarding the technical adequacy of the instruments? These questions illustrate measurement problems commonly encountered in evaluation.

The evaluator can, of course, get help from the literature in identifying potentially useful instruments. The Buros Mental Measurements Yearbook[27] catalogs and assesses many instruments, especially in the cognitive domain. A recent book of Miles, Lake and Earle[28] identifies and discusses a number of instruments in the affective domain. Under the leadership of Gene Glass, the Laboratory of Educational Research at the University of Colorado maintains a set of fugitive instruments developed for use in federal projects. Also one can identify many potentially useful instruments by checking through completed doctoral dissertations.

The evaluator who does not find an appropriate instrument faces a dilemma. Should he choose an inappropriate instrument that has been validated? Or develop new instruments that respond directly to the purposes of the study, knowing there is no possibility of validating the instruments before use? This paper asserts that the latter course of action is often the only feasible one. In any case, problems of instrumentation are key concerns in developing an evaluation design.

The evaluation process. The fourth consideration relates to the design of an evaluation process. Most evaluation theorists would agree that evaluation is a cyclical, interactive process without clearly sequential steps. Yet, most have proposed a general process indicating what tasks must be performed. These tasks must be defined since they provide basis for evaluation training and the budgeting of evaluation studies.

As noted earlier, the evaluation process can be divided into three basic stages: Delineating involves specifying evaluation activities--e.g., determining the audiences to be served, identifying questions to be answered, determining alternative answers to be considered, formulating criteria for judging alternative answers, clarifying assumptions (for example, those pertaining to design, analysis, and measurement), defining the system in which evaluation is to occur, and determining the policy and contractual agreements that will govern the evaluation work. Agreements should be reached in these areas during initial planning, but should remain open to renegotiation throughout the study. Such openness to negotiation requires continuous interaction between evaluators and audiences throughout the evalution study.

Technical activities required in obtaining needed information include specifying samples for data gathering, choosing appropriate data-gathering instruments, specifying data-gathering procedures, determining the means for data storage and retrieval, selecting analysis techniques, and outlining required technical reports. Proper implementation of these design steps requires considerable technical expertise; therefore the assistance of evaluation specialists may be desirable. Little interaction between evaluators and audiences is required for obtaining information.

Evaluators and their audiences collaborate in applying evaluative data to pertinent decision making and accountability questions. The evaluator's essential role in this stage is to provide information to appropriate audiences. Those audiences in turn use the information in making decisions and ensuring accountability.

Evaluation agents. The question is often posed whether evaluation should be conducted by insiders or outsiders. In general, internal evaluators are considered to be those directly employed by the agency whose work is being evaluated, and they are usually the persons primarily accountable for that work. External evaluators, in general, are not directly employed by the agency whose work is being evaluated; those who are employed by the agency are not in any line relationship to the person whose work is being evaluated, or superordinate to this person. As is apparent, the distinctions between internal and external are not always clearcut; an evaluator is generally labeled one or the other according to degree of involvement with the agency.

Both external and internal evaluation offer advantages. External evaluators supposedly offer a predisposition to objectivity which generally augments their credibility among various evaluation audiences. Internal evaluators, on the other hand, are more inclined to be constructive, and less likely to be perceived as threatening. In addition, they are often less expensive per unit of time than external agents.

It may be wise to have evaluation performed by both internal and external agents. An inhouse evaluation group could perform the formative, proactive evaluation needed to facilitate decision making. In many cases decision makers and their staff members can appropriately perform their own formative, proactive evaluation. Agency staff can provide the intensive, constructive input that this type of evaluation requires, while ensuring compliance with the values, mission statements, and goals of the institution. External evaluators cannot usually devote the extensive attention required for formative, proactive evaluation--at least not at a reasonable cost.

On the other hand, retroactive, summative evaluation should generally be conducted by an external agent capabile of maintaining detachment, objectivity, and credibility. Accountability reports submitted by external evaluators are likely to be better received by evaluation audiences--especially the funding agency--than those submitted by internal evaluators.

Both internal and external evaluation are needed if decision making and accountability are to be served. At the same time, internal, proactive evaluation is fundamentally more important to accountability than is external, retroactive evaluation. For one thing, internal evaluation can survive better without external evaluation than vice versa. External evaluation can only be conducted efficiently when it is preceded by systematic internal evaluation. Internal evaluation not only assists in identifying what won't work, but also provides a partial data base that the external evaluator can use in judging the program's goals, design, activities, and results. For external evaluators to gather systematically all the data needed to make summative judgments is generally too time-consuming and inefficient.

Implementing the Evaluation Plan: General Discussion

It is one thing to develop an evaluation design capable of serving its intended purposes. It is quite another to implement that design within the sociopolitical, administrative and human parameters of the real world. Many things can jeopardize an evaluation study. Some problems--mainly those related to the conception and design of an evaluation study--are discussed in previous sections of this paper. Following is a list of five additional problems related to the implementation of an evaluation study. This list is intended to help evaluators of social action programs predict problems while there is still time to introduce appropriate preventive measures.

Sociopolitical problems. Because evaluations are carried out in social and political milieus, the evaluator must learn to interact effectively with various groups and organizations. Otherwise, the whole evaluation effort may be subverted or even terminated. As any evaluator can testify, sociopolitical problems and threats are real; and evaluation training programs and textbooks do not adequately prepare evaluators to deal with these problems. Evaluators must therefore become proficient in spotting potential problems and overcoming them.

It is one principle of social change that unless persons are involved early in the development of an innovation, they are not likely to support or use it later. Thus, an evaluator should interact closely with those persons on whose cooperation the success of the evaluation depends. Evaluation activities should also be supported by some system of ongoing internal communication; system personnel who do not understand their roles in the evaluation cannot perform them efficiently, and will only inhibit the evaluation's success.

Internal and external credibility are other sociopolitical problems with which an evaluator should be concerned. Internal credibility involves the extent to which program personnel trust the evaluator to be objective in his collection and reporting data. External credibility involves the extent to which persons outside the program being evaluated have confidence in the evaluator's objectivity. To the extent that evaluators have achieved internal credibility, they are likely to encounter external credibility problems; but the evaluator must be alert to problems in both areas and strive to overcome them. Problems of data security can influence an evaluator's ability to collect data and thus affect the technical adequacy of results.

Another sociopolitical problem concerns public relations. Evaluations--especially of social action programs--are often of interest to some groups not only for the information they provide, but also for their potential sensationalism. Interaction with news media personnel is common in evaluation work, and presents both opportunities and problems. The news media provide a valuable communications channel for informing the public about evaluation activities. However, reporters are not always respectful of the evaluator's concern for controlling what information is publicly disseminated. Evaluators should therefore take the initiative in public relations, taking advantage of the opportunities provided, but being careful to monitor the information released for dissemination.

Contractual/legal problems. Evaluations should be governed by working agreements to ensure efficient collaboration and to protect the rights of each party involved. Successful evaluation requires collaboration among evaluators, sponsors, and program personnel. To be effective, this collaboration should be guided by a written, legal agreement. Such an agreement should reflect awareness of potential problems and provide the assurances required by each party in the event of a dispute.

One way of conceptualizing contractual and legal problems in evaluation is to list items that would be standard in most contracts between an external evaluation agent and sponsor. Such contractual items might include the following:

- Definition of the client/evaluator roles
- Specification of evaluation products
- Projection of a delivery schedule for evaluation products
- Specification of authority for editing evaluation reports
- Definition of allowable access to data
- Definition of conditions for the release of evaluation reports
- Differentiation of responsibility and authority for conducting evaluation activities
- Specification of the source and schedule of payments for the evaluation.

Satisfactory performance in these task areas is essential to effecient, technically adequate and useful evaluation.

Management problems. Evaluators must face a number of crucial management problems. In coping with such problems, evaluators should strive to enhance the parent agency's capabilities to conduct long-range evaluation studies. Following are 10 potential management problems offered for consideration by social action program evaluators.

- The organizational mechanism for the evaluation.
  Which is most appropriate--an inhouse office of evaluation, a self-evaluation system, a contract with an external agency, or a consortium-supported evaluation center?

- The organizational location of the evaluation unit.
  To whom does it report? Through what channels can the evaluation influence policy formulation and administrative decision making?

- Policies and procedures governing evaluation activities.

- Staffing problems.
  Role definitions, recruitment, training, competence and motivation of the evaluation staff.

- Facilities needed to support the evaluation.
  What office space, equipment and materials are needed?

- Data gathering schedule.
  What instruments will be administered, to what groups, according to what schedule?

- Reporting schedule.
  What reports will be provided, to what audiences, according to what schedule?

- Training.
  What evaluation training will be provided, to what groups, and who will provide it?

- Installation of evaluation.
  Will this evaluation be used to aid the organization in improving and extending its internal evaluation capability?

- Budget for the evaluation.
  The availability, internal structure, and monitoring of the budget and its impact on the quality of the evaluation.

Moral and ethical problems. Evaluations are not mere technical activities; they are intended to serve socially valuable purposes. Specifying those purposes inevitably raises questions about what values should be reflected in the evaluation. Deciding on value bases also poses ethical conflicts for evaluators--who have their own sets of norms and values--and for other parties involved in the evaluation process. At least three kinds of moral/ethical problems might be encountered.

The first problem pertains to justifying evaluation. Usually two kinds of justification are suggested by evaluators. The first is based on the assumption that evaluation can make a significant contribution to educational improvement or other desired social change. Unfortunately, only slim empirical evidence is available to support this notion. A second type of justification stems from the public's right to know. But this right must obviously be tempered by sensitivity to the privacy of individuals. Given such constraints, an evaluator must develop faith in evaluation by focusing on the value of daily efforts, and not place too much emphasis on social acceptance of evaluation.

The second ethical problem relates to possible invasion of privacy. Despite a strong desire to discover the truth, the evaluator has a moral and ethical obligation to protect individuals' privacy. The conflict between the technical requirements of an evaluation design and the moral obligation to protect evaluation subjects may sometimes be difficult to resolve.

The third ethical problem concerns the evaluator's obligation to report negative results despite administrative pressures to the contrary. Sometimes an evaluator is faced with losing a job if negative findings are reported, or compromising ethical standards if they are not.

Psychological problems. Because evaluation involves human interaction, it entails certain psychological problems. This kind of problem may account for the lack of impact noted in relation to many evaluation studies and the rejection of findings despite professional design and implementation. Psychological problems can affect all three major groups involved in any evaluation: evaluators, evaluation subjects, and clients (or audiences).

Because evaluation is a growing field, the effectiveness of which has yet to be demonstrated, the evaluator must develop a strong faith in evaluation. He or she must learn to solicit the good will of evaluation subjects, avoid being manipulated by political forces, and refrain from making judgments based on insufficient data. In addition, an evaluator must face the loneliness of someone who is mistrusted by evaluation subjects and clients, and who, because of the danger of co-optation, must avoid developing too close relationships with those persons.

Evaluation subjects often feel threatened by evaluation because they are uncertain of its purposes and results--and the consequences to them. They often perceive evaluation as a threat to their self-concept, professional reputation, and economic security. Having to justify their actions and disclose increasing amounts of intimate information causes many evaluation subjects to develop a new perspective regarding their professional responsibility.

The evaluation client takes many risks in initiating an evaluation study, the organizational and personal consequences of which are largely unpredictable. The client must be open to change and innovation, willing to acknowledge faults, capable of maintaining faith in structure and planning, and energetic enough to carry out innovations. Often clients must overcome feelings of technological inferiority through admission of ignorance in evaluation technology and mastery of new skills and knowledge.

Developing and Implementing an Evaluation Plan at Mountain-Plains

The research and evaluation functions at Mountain-Plains can best be described through identification of the Research Services Divisional components. The Division comprises individual positions charged with certain responsibilities which may conveniently be grouped by the major area of research/evaluation focus.

Pre/Post Program Research. This area is staffed by one professional (research analyst) and one support person (data clerk). Pre/Post Program Research has primary responsibility for monitoring the completeness and accuracy of socioeconomic information gathered on applicant families at the time of their pre-entry interview. Other functional responsibilities include establishing follow-up schedules, providing instrumentation, and monitoring the quality and timeliness of post-program performance data gathered on student families who have exited the program. Pre/Post Program Research provides regular and special reporting on students' pre-program characteristics and post-program status with reference to placement and income.

Intra-Program Research. An affective evaluation specialist is responsible for evaluating program effectiveness in achieving affective objectives. During program development, this specialist works under the guidance of the director to design and implement affective evaluation for the Counseling, Career Guidance, Community Instruction and Parent Involvement components--and, to a lesser degree, for the Family Core Curriculum and Occupational Preparation components. Operationally, the affective evaluation specialist provides assistance in the establishment of affective objectives, selection of instrumentation and definition of evaluation criteria.

Operationally, an internal evaluation specialist supervises the data monitor's office, and monitors the quality of timeliness of data required to evaluate the program's attainment of cognitive and competency objectives. During program development, this individual has primary responsibility for the definition of terminal student performance objectives, the establishment of evaluation criteria for those objectives, the design and implementation of process systems to assess student progress, and, in cooperation with the Student Data Office, the design and implementation of student data storage, processing and retrieval systems.

A tests and measurements specialist is responsible for supervising and monitoring the validity and reliability of all program assessment instruments. This specialist supervises the design and formatting of locally developed tests and performs subsequent reliability and validity analyses of these instruments. Additionally, the tests and measurements specialist develops, analyzes and reports on student evaluation of staff and curriculum. This individual also consults with other Research Services staff, providing technical advice on statistical techniques and programming requirements for all Research Services analyses, and supervising the Test Center.

Division administrative staff consists of the division director, an administrative secretary, and a half-time graduate assistant for computer services, located at the computer site.

The senior curriculum specialist, affective evaluation specialist, research analyst, internal evaluation specialist and tests and measurements specialist report directly to the division director. The director is responsible for establishing the overall evaluation/research goals of the division, budgeting human and financial resources for accomplishing these goals, establishing divisional tasks forces, and implementing divisional goals. The director also provides leadership and approval in the design and implementation of research plans, and montiors staff activities to assure compliance with established timeliness and budgets. Additionally, the director serves as a member of the Management Council and acts as divisional spokesman in relation to other program entities. The division director also has primary responsibility for informing the funding agency of evaluation results and future plans on an annual basis.

Reports regularly produced by the Division cover--

1. Pre-center characteristics of incoming families
2. Pre-center characteristics of incoming families by state of origin
3. Monthly management information
4. Student evaluation of staff
5. External evaluation relocation reports.

Many more reports are anticipated as a result of the following research activities:

- Extensive analysis of program effect (measured externally)
- Various research activities undertaken at the request of management

- Case studies of exited student families
- Validity and reliability analyses of assessment instruments
- Assessment of Mountain-Plains impact on particular student characteristics
- Measures of relative student success in achieving terminal performance objectives
- Curriculum status
- Surveys of employer evaluations of Mountain-Plains graduates.

Additionally, documents presenting designs for research and evaluation of particular topics are prepared on an episodic basis. The diverse audiences for these reports include management staff, the Board of Directors, other program staff, the National Institute of Education, state school officers and various professional associations. A number of continually updated catalogs are also prepared and disseminated by the Research Services Division. These include the Catalog of Curriculum Offerings, a master listing of Curriculum in Effect, Data Reporting Responsibilities of Instructional Staff, the Test Center Manual, and a Master Catalog of Mountain-Plains occupational offerings by average projected completion times. Research Services also maintains a census file of student and control group families with date of entry, family sociodemographic characteristics, exit date, completion status, and relocation address. All reports for external dissemination must be approved by the division director prior to issuance.

Efforts and Results

Assessing the Results of the Evaluation: General Discussion

In developing an evaluation system for social action programs it is important to have in mind an appropriate set of criteria for assessment of evaluation results. Retroactively, such criteria could be used for summative evaluation of results. Proactively, they could be used to guide the evaluator in conducting the evaluation.

Criteria for judging research are suggested in many methodological publications. Most of these publications are in agreement that research must produce findings that are internally and externally valid, i.e., true and generalizable. These technical standards are not sufficient, however, for judging evaluation findings.

Evaluation must produce technically adequate information, and useful results; in addition, the evaluation must be cost effective--that is, the findings must be worth more to audiences than the cost of their production.

These three standards--technical adequacy, utility, and cost effectiveness--can be spelled out in the form of eleven specific criteria. It is apparent that the evaluator cannot always satisfy every criterion in all respects. He or she must focus on the total effort, therefore, making whatever compromises are necessary to satisfy the greatest possible number of criteria.

Following are the three sets of criteria:

1. Technical Adequacy

   - Internal Validity. This criterion concerns the extent to which the findings are true. Does the evaluation design answer the questions it is intended to answer? Are the results accurate and unequivocal? Clearly any study, whether research or evaluation, must at a minimum produce accurate answers to the questions under consideration.

   - External Validity. This criterion refers to the generalizability of the information. To what persons and program conditions can the findings be applied? Does the information hold for only the sample from which it was collected or for other groups? It is dated or are the findings predictive of what would occur in future applications?

   - Reliability. Reliability concerns the accuracy of the data. How internally consistent are the findings? How consistent would they be under test-retest conditions? Findings which lack precision and reproducibility may be simply random and therefore meaningless.

   - Objectivity. Objectivity concerns the degree to which data are public. Would competent judges agree on the results? Or, are the results highly dependent on the unique experiences, perceptions, and biases of the evaluators? It is possible that findings provided by this set of evaluators could be reproducible and therefore reliable yet heavily biased by the evaluators' predilections?

2. Utility

- Relevance. Relevance concerns whether the findings respond to the purposes of the evaluation. What are the audiences? What information do they need? To what extent is the evaluation design responsive to the stated purposes of the study and the information requests of the audiences?

- Importance. Importance relates to which particular data should be gathered. In any evaluation study a wide range of data are potentially relevant. However, practical considerations usually dictate that only the most important data can be gathered.

- Scope. Utility also implies that evaluative information have adequate scope. Information that is relevant and important may yet fail to provide all the information that the audience needs if the evaluation fails to address all the important questions.

- Credibility. Credibility concerns whether the audience trusts the evaluator and considers him or her free of bias in conducting the evaluation. Audiences are not often in a position to assess the technical adequacy of a study. The next best thing they can do is decide whether they have confidence in the group conducting that study.

- Timeliness. In research, the sole aim is to produce new knowledge that is internally and externally valid. It is thus appropriate that researchers take whatever time they need to produce scientifically adequate information. In evaluation, however, the purpose is not to produce new knowledge but to influence practice. Practitioners must have information available when they need it; therefore, timeliness is a major consideration in evaluation.

- Pervasiveness. This criterion concerns the dissemination of evaluation findings. Clearly the utility of an evaluation can be partially gauged by determining whether all of the intended audiences receive and use the findings from the evaluation.

3. Cost Effectiveness

- Efficiency. Efficiency refers to the need to minimize evaluation costs without sacrificing quality. Proper application of the utility criteria of relevance, scope, importance, and timeliness should eliminate the grossest inefficiencies. However, because alternative ways of gathering and reporting data vary in their financial and time requirements, it is important to choose the most efficient ways of implementing the evaluation design.

Assessing Evaluation Efforts and Results at Mountain-Plains

Evaluation efforts at Mountain-Plains encompass the following activities conducted on a systematic, ongoing basis:

1. Student mastery of Job Title objective
2. Estimates of internal cost effectiveness of instruction
3. Curriculum evaluation by students and employers through the use of questionnaires
4. Internal assessment of student performance
5. Third-party evaluation conducted by content experts contracted by the funding agency
6. Trial implementation of selected curricula at various locations
7. Internal evaluation of curriculum objectives
8. Assessment of student mastery of curriculum objectives at several levels and for several purposes
9. Intensive case studies (followup)
10. Routine interviews (followup).

Several generalizations can be made based on Mountain-Plains' experience in simultaneously conducting research and evaluation of an integrated educational social action program. First, pure (theoretical) research in such a program is possible only on a very general level. Second, given the ethical constraints that must apply to human subjects, it is impossible to evaluate some components in depth. Third, to permit true formative evaluation of a new concept, the program and evaluation plan must be developed concurrently. Also, evaluation considerations should guide but not dictate, program objectives; objectives having social and ethical dimensions, for example, are not appropriately influenced by evaluation considerations. And fourth, evaluators must, to the extent humanly possible, avoid commitment to any one methodological or theoretical school; they should adopt an eclectic approach, considering how various methods and theories could assist in creating an integrated program design and evaluation plan.

In retrospect, a viable evaluation design for an educational or social action program should probably have the following characteristics:

1. The design should be atheoretical, eclectic and an integral part of the program. The evaluation design should be appropriate for the specific program or problem under consideration, not founded on a general theory or method. Evaluation elements are inseparable from an operational program and have many uses. The evaluator should maintain an awareness of various theories and methods (tools) and apply them as suitable to the task, but should not confuse the status of tool and task. An interdisiciplinary approach to formation of the evaluation team and subsequent construction of the design can provide built-in impetus toward an eclectic approach. While the results often contribute to basic or applied knowledge, pragmatism is the byword.

2. Within the context of data collection and analysis; the evaluator must accept inherent limitations and strive for informed judgments rather than "final proof." Within limits of human fallibility, this must be accomplished without substituting personal or theoretical prejudice for data-based judgment. The evaluator must not, however, dismiss information consistent with other (not his own) disciplinary biases.

3. Measures selected should be appropriate for the intended use of the data. Everybody says this. It needs to be said again because so often it is unheeded.

4. More than one measure/observation should be used for indirect conclusions. For example, an employee's statement of income is a direct measure and permits direct conclusions about earning. An employer's assessment of the extent to which that same employee likes his work, on the other hand, is indirect and although valuable, is insufficient to permit direct conclusions.

5. Evaluation priorities should be based primarily on practical rather than statistical concerns. Example: If a new curriculum method allows more rapid student mastery (99 percent confidence) but in aggregate does not free sufficient resources (staff, time, and money) to expand services, raise teacher salaries, or permit other beneficial outcomes, the results will be of use to curriculum theorists, but of little practical value to school administrators.

6. Reporting must be appropriate for the audience(s) it serves. For example, it is sufficient in a student evaluation of staff based on some experimental instrument to report to an audience of professional evaluators that "Discrimination is low, and criterion evidence negative, indicating extreme caution in use and interpretation." Such wording would be inappropriate, however, in a report to a school administrator hungry for objective data to guide his or her thinking about tenure, salary, and the like. For such an audience, one must elaborate--e.g., "Apparently the instrument is not able to measure the intended domain--differences in teaching effectiveness. Students of similar ability assigned to different teachers are known to show significant differences in learning. Differences in rating on the experimental instrument, however, are insignificant. Additionally, the ratings as established do not correspond to known differences in learning--that is, high learning may get a low rating on the instrument and vice versa. It is thus recommended that results from this measure not be used in decisions about teacher competence. It is further recommended that the entire instrument be redeveloped."

   Although this rather lengthy explanation is implied in the simpler one-sentence version, the full implication will likely be drawn only by research or evaluation specialists. Jargon should be avoided when possible--especially in reports to those outside the profession.

7. A comprehensive evaluation design should be stable at the core, yet dynamic and responsive. One feature of the Mountain-Plains approach has been constant improvement of design through specific sub-sample interventions. For example, student selection originally focused on heads of households, and not on spouses, but in the professional judgment of counselors, program casualties were most often

> attributable to marital problems beyond the (then) current scope of Mountain-Plains' services. This judgment gained credibility when psychological profiles of dropout wives showed negative deviations from entry norms, while those of dropout husbands showed positive deviations. Such subsample studies have been used as a basis for effecting program improvements only when ongoing research provides ready accessibility to data.[29]

LESSONS LEARNED FROM THE MOUNTAIN-PLAINS EXPERIENCE

During development of the Mountain-Plains program and concomitant evaluation design, several lessons were relearned. No startling new evaluation paradigm complete with systems charts and impressive vocabulary ensued. No dramatic new cookbook or manual is offered. However, the fact that evaluators of different disciplinary backgrounds were able to draw similar conclusions regarding Mountain-Plains' objectives gives evidence to the integrity of the program design, and makes those lessons worth exploring.

The lessons learned from the Mountain-Plains experience are discussed in relation to tradition, innovative developments, theoretical literature, issues and policy questions.

Traditional Wisdom

Eclectic Approach

Traditional practice often follows one discipline or one basic methodology. In Mountain-Plains' experience, an interdisciplinary, multi-methodological approach seems most effective in meeting the highly diverse needs of an adult, disadvantaged population.

Criterion Referenced Testing

Tradition condones standardized testing normalized for groups of students. Although Mountain-Plains does use standardized tests in placing students and in assessing vocational aptitude and interest, the program's emphasis on demonstration of competency seems to call for use of criterion referenced tests. Therefore, Mountain-Plains uses criterion referenced tests for performance validation relative to student attainment of behavioral objectives.

Staff Evaluation

Traditionally, staff performance is evaluated only by the staff members' supervisor(s). But in a program designed to meet the identified needs of a specific target population, it seems appropriate that members of that population have a voice in evaluating the program's effectiveness. One important measure of program effectiveness is the perceived competence of staff. Mountain-Plains' students are asked to evaluate instructors on such factors as apparent competency and ability to establish rapport.

Innovative Developments

Numerous innovations in education evaluation methodologies seek to determine the extent to which program objectives are determined both for the program as a whole and within the various components. Comprehensive evaluation must take into account the interactions between program components; the relative success of any given component has potential repercussions throughout the program.

Theoretical Literature

The Mountain-Plains experience supports the following theories advanced by extant literature:

- Evaluation design and methodology should be modeled to fit the program design and operation rather than vice versa.
- Evaluation by objectives is a generally effective approach.
- Formative evaluation processes (input-process-output) should be incorporated into the evaluation design.
- Instructor performance should be evaluated on several dimensions, and students should participate in that evaluation.
- Accountability should be ensured through close monitoring of student attendance and progression; moreover, both instructor and student should be held for the student's performance.
- Data collected through personal interviews should be validated.

Issues

The Mountain-Plains experience addresses two issues often debated by educators, psychologists, and others:

1. Cognitive tests are adequate assessments of content mastery.

2. Student performance objectives which are behavioral in nature and which specify tasks, conditions, and criteria are too idealistic and too difficult to develop and implement.

The Mountain-Plains experience indicates that cognitive tests are not, in themselves, adequate assessments of student mastery. Cognitive tests are valuable in assessing a student's theoretical knowledge or understanding of a subject and are used at Mountain-Plains for that purpose. However, Mountain-Plains assumes that success on the job must often depend on ability to perform tasks which cannot be assessed using paper-and-pencil tests. Performance tests must be used to assess students' ability to complete these tasks. It is further assumed that a student could have intellectual understanding of how to perform a task without actually being able to perform the task. In such instances, cognitive test scores could be misleading. It has been Mountain-Plains' experience that performance tests and cognitive tests provide complementary feedback that affords the most accurate overall picture of student attainment levels. Therefore, cognitive testing is not supplanted by performance testing at Mountain-Plains, but rather, the two are used in harmony.

In response to the second issue, it is Mountain-Plains' experience that behavioral objectives are neither too idealstic nor too difficult to develop and implement given appropriate guidance and staff in-service training. For example, it seems helpful to have the consultative assistance of curriculum specialists throughout all phases of objectives development and modification. Such persons can help ensure measurability of objectives and curricular relevance. In writing objectives for a career education program, it also seems useful to maintain close communication with local employers, who can help guide the development of objectives which reflect skills needed on the job.

Policy Questions

Developmental versus Operational

Should educational programs be partly developmental and partly operational? Mountain-Plains' experience suggests that they should.

Without a developmental focus, formative evaluation findings have little chance of influencing operational program modifications, and summative evaluation findings are meaningless because no practical means of correcting deficiencies or testing new ideas exists.

Cost Effectiveness

Must educational programs be cost effective? Mountain-Plains affirms that they must. Through the close cooperation of the Research Services Division and the Controller's Services Division, Mountain-Plains has developed what appear to be effective ways of estimating the cost effectiveness of various program alternatives.

SUMMARY

Mountain-Plains' researchers are not really any more sophisticated than others, nor have they developed an evaluation model guaranteed to produce miraculous evaluation results. Rather, resource availsbility, isolation, time, and necessity combined to allow Mountain-Plains researchers to put together a pragmatic evaluation plan useful in analyzing program operations and measuring outcomes.

The extensiveness and complexity of the program influenced the decision to evaluate different types of outcomes from different perspectives. This approach not only allowed but mandated the interactive evaluation of objectives which typically accrued to different social agencies and institutions.

If Mountain-Plains has made any special contribution to educational evaluation methodology, it is in the deemphasis on elaborate evaluation schemes competitively advanced by various schools, in favor of logic and common sense. Mountain-Plains' experience reaffirms the atheoretical, empirically pragmatic approach to evaluation, along with an open-mindedness to the adaption of various methods and tools available throughout the social sciences. A well intentioned analogy underscores the value of common sense and practicality. Program evaluators are sometimes like the home repair service which attempts all jobs, from wiring to roofing, using one set of tools--designed for plumbers. They make a determined attempt to pound roofing nails with pipe wrenches, and sever boards with pipe cutters. The problem should not be resolved by banning pipe wrenches and pipe cutters, but by learning to apply available tools appropriately, guided by logic and common sense, and allowing for theoretical, methodological, and disciplinary variety.[30]

CHAPTER IV:

COUNSELING AND CAREER GUIDANCE

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COUNSELING AND CAREER GUIDANCE

INTRODUCTION

Counseling, Career Guidance, and Community Development and Recreation are three distinct program components under the administration of the Student Services Division--one of the five major divisions within Mountain-Plains. Student Services is responsible for students' development in affective areas--personal growth, attitude, lifestyle. Each Student Services component exists to fulfill defined objectives relating to student development, and it is the division's administrative responsibility to ensure that these objectives are carried out. Student Services is also responsible for facilitating interdivisional coordination of efforts--of major importance in enhancing student development.[31]

At Mountain-Plains, Counseling and Career Guidance are separate components. Unlike many traditional service agencies, in which one person is expected to provide both counseling and career guidance, it is assumed in this model that each of these services is vital and requires the attention of a full-time specialist.

Counseling and Career Guidance share the following basic assumptions:

1. Regular interaction between Counseling and Career Guidance specialists, student advisors, and teachers will help maximize benefits to students.
2. A developmental approach in Counseling and Career Guidance assists each student or student family in acquiring the psychological coping behaviors, decision-making skills, or employability characteristics important to future economic and occupational adjustment. Such a developmental approach is viewed as critical, given the poor personal, interpersonal, and social functioning often displayed by newly arrived Mountain-Plains students.
3. Services should be systematically planned to help students meet behavioral expectations. Within such a framework, student progress can be effectively monitored and an accountability design implemented.

4. Counseling and Career Guidance services should be based on the needs of the clients to be served.

In most counseling or career guidance literature, the assumptions cited above have been tested independently of one another, outside an institutional context, or with populations not predominantly composed of minority or economically disadvantaged persons. The Mountain-Plains experience departs from that referenced in the professional literature in many ways. Thus, findings about its internal effectiveness is providing counseling and career guidance services to disadvantaged families have highly significant research and development potential.

Given this brief introduction to some of the assumptions underlining Mountain-Plains' counseling and career guidance efforts, this chapter will touch on the following topical areas:

1. The organization of the Counseling component
2. The theoretical premises underlying counseling approaches
3. Student characteristics affecting counseling services
4. Interaction of Counseling with other components of Model IV
5. Problems encountered in installing counseling services
6. Evaluative data on counseling effectiveness
7. The organization of the Career Guidance component
8. Theoretical premises underlying career guidance approaches
9. Student characteristics affecting career guidance
10. Interaction of Career Guidance with other components of Model IV
11. Problems encountered in installing a career guidance component
12. Evaluative data on career guidance effectiveness
13. Implications for counseling theory, professional practice and research and development from a family-based, residential model

14. Implications for career guidance theory, professional practice, and research and development from a family-based residential model

15. Conclusions.

COUNSELING

CONCEPTUAL BOUNDARIES

The Broader Meaning and Significance of the Subject

A program and population as complex as that to which counseling services at Mountain-Plains must respond demand a variety of theoretical perspectives. Central to those perspectives are the notions of Erik Erickson in Childhood and Society[32] about inappropriately resolved developmental tasks. The organizing principle for personal and family developmental counseling has been the appropriate resolution of the developmental tasks of adult transition: achievement of identity and intimacy. Instructors and counselors who observed Mountain-Plains students daily concluded that development of self-concept, identity, and personal integration were major--if not the primary--problems for that population. Erickson's concepts provide both an explanation for the situation and a framework for action. Rappoport[33] sumarized Erickson's perspectives as follows:

> Erickson's chronological framework for ego development emphasizes how a person's sense of identity evolves during the typical life cycle. His discussion involves the "ego qualities" that emerge at various ages or developmental periods. For each period Erickson gives the particular ego quality that must appear for the person's sense of identity to develop properly. There is a "crisis" during each age period which takes the form of a conflict between two alternative ego qualities, one being the quality required for a healthy, normal ego development and the other being the quality associated with abnormal development. The crisis is resolved for most persons when the healthy quality prevails over the unhealthy one.

Basic to Erickson's viewpoint is the idea that proper development becomes more difficult when it does not occur in the proper sequence. Most Mountain-Plains students display impaired or arrested personality development as defined by Erickson. A majority have not developed sufficient trust, autonomy, initiative, industry, sense of identity, ability to develop intimate relationships or generativity to ensure successful employment or a desirable lifestyle. Thus, most counseling objectives at Mountain-Plains reflect the need to help students overcome deficiencies in personal de-development, enhance self-concept, and strengthen relationships with others.

The general theoretical frame of reference provided by Erickson's work is supplemented by the constructs of Maslow,[34] Shostrom,[35] and Rogers[36] as reflected in the Personal Orientation Inventory (POI) scales. These scales represent both the goals and the criterion measures to which the Counseling program is directed. Fundamentally, Mountain-Plains' counseling goals are based on the premise that the self-actualizing person is more fully functioning and lives a more enriched life than does the average person. Such an individual develops and uses all of his or her unique capabilities free of the inhibitions and tensions that less self-actualized persons experience. Here again is the notion that behaviors and attitudes which underlie effective self-identity and interpersonal skills can be enhanced through counseling.

Mountain-Plains' Counseling program is also influenced by the work of Ellis[37] and Glasser[38]--whose perspectives are in many ways complementary. Ellis has suggested, for example, that psychotherapy can be viewed as a process of critically examining a client's irrational ideas and value orientations. Within this context, the counselor helps the client purge self-sentences which are negative, personally destructive, and inaccurate. In essence, Ellis argues that much of what is called emotion is really a kind of biased or strongly evaluative thought. As such, it needs to be confronted rationally rather than being allowed to shape individual behavior unchallenged. Glasser contends that the client must be helped to accept personal responsibility for his or her behavior. Rather than projecting onto others one's failures to meet obligations or cope with life effectively, the client must learn to feel in control of his or her life's circumstances.

Boundaries for Analyzing the Subject

Obviously, a research and development effort must both shape and be shaped by the characteristics of those served. This is especially true in a model intended to serve a disadvantaged or minority population. A residential program serving this population in a rural, relatively isolated setting, focusing on the total family, with a career education emphasis, is essentially without precedent. Thus, theoretical and operational prototypes based upon experiences with persons from majority cultures, or heads of households only, or in urban, noninstitutional settings must be applied cautiously to Mountain-Plains.

Some characteristics of the student population served by Mountain-Plains' Counseling program should be noted. General demographic observations include the following:

- About 17 percent of all families are single-parent families.

- The average family size is 3.82 persons.

- About 83 percent of heads of households are married, 11 percent are divorced, 4 percent are separated, 2 percent are single, and fewer than 1 percent are widowed.

- The average number of children per household is 2.

- The average head of household is 27.2 years old.

- The average spouse is 23.8 years old.

- The average child is 5.7 years old.

- Heads of households range in age from 18 to 64 years.

- Upon entry, 32.4 percent of heads of households are employed full time, 8.4 percent are employed part time and 54.3 percent are unemployed.

- Upon entry, the average head of household has experienced 19.6 weeks of unemployment during the past year; the average spouse 38.5 weeks.

- The average monthly salary for heads of households for the past three years is $351; for spouses, $224.

- The average family income from employment for the past year is $2,756.

- During the year prior to entry, 45 percent of all families receive welfare, 7.3 percent receive unemployment compensation, 13 percent receive commodities, and 59.9 percent receive food stamps.

- The average grade level achievement in reading for heads of households is 9.7 years; for spouses, 9.8 years. In math, heads of households average 8.4 years; spouses, 9.5. In language, heads of households average 8.9 years; spouses, 10.9. In study skills, heads of households average 8.3 years; spouses, 9.6 years. These grade level equivalent scores are established through administration of the Comprehensive Test of Basic Skills.[39]

The cumulative histories of Mountain-Plains students indicate the following general psychological characteristics:

- Mistrust of spouses, friends, and staff
- Low self-concept and self-confidence
- Low initiative, particularly in dealing with "authority figures," combined with ostensible fear of punishment
- Feelings of inferiority
- Avoidance of or inability to develop intimate relationships
- Great apprehension in comparison to "normal" populations
- Little conscientiousness or perseverence
- Less capacity for intimate contact than "normal" populations.[40]

In one research study[41] conducted at Mountain-Plains, 26 noncompleting two-parent families were studied with special attention to how their entry level POI and 16 Personality Factor Form C (16PF) scores compared with those of the Mountain-Plains population as a whole. That study revealed that men who drop out tend to be more outgoing, emotionally stable, trusting, imaginative, and group dependent; less intelligent, assertive, and relaxed; less likely to endorse positive mental health values; less self-acceptant or acceptant of their own aggressive feelings; and more aware of meaningful relationships between opposites than the average male student. The study also showed that married females who drop out tend to be more outgoing, happy-go-lucky, venturesome, and troubled by self-conflict; less trusting, relaxed, likely to endorse positive mental health values, flexible in applying values, spontaneous, synergistic and aware; and less capable of intimate contact, self-regard and self-acceptance than the average female student. The reader is reminded that the average male and female student at Mountain-Plains resembles the clinical norms on the POI or 16PF rather than the normal norms; thus Mountain-Plains' dropouts show even greater extremes than clinical norms.

Finally, Mountain-Plains' Counseling component, unlike virtually any other off-reservation counseling service, deals with an American Indian (Native American) population as part of its clientele. The program completion rate of Indian enrollees has been about half that of the total student population average; a task force was commissioned to identify the underlying causes for this lack of success and recommend ways of helping Indian families achieve successful program completion. While the report of that task force is essentially an interpretative rather than empirical analysis of events and observations, it nevertheless represents another view of a Mountain-Plains student group to which counseling services must respond. According to the task force report, the major causes for premature program termination among Indian students include--

1. Alcohol abuse. Resentment and depression resulting from drinking often lead to physical conflicts which sometimes extend beyond friends and family. Once initiated, antisocial behavior precipitated by drinking becomes a pattern.

2. Unwise spending. This problem is especially prevalent in cases where one or more family members drink excessively. When inadequate finances become seriously depleted, family relationships are strained. Marital discord frequently accompanies alcohol abuse.

3. Marital problems. Such problems tend to be more frequent and more intense than among the general Mountain-Plains population. Infidelity seems most often to result from spouses' inability to achieve a true intimate relationship. Marital disputes seem generally more violent among Indians, entailing spouse or child abuse, and often requiring involvement of outside authorities.

4. Demands of a structured schedule. Institutions like Mountain-Plains, which are dominated by "majority" social/cultural values, place a high premium on punctuality. Students are expected to follow a predetermined schedule, and to be on time for special activities. Such expectations contrast sharply with the leisurely, unstructured atmosphere many Indians have known on the reservation.

5. A strong sense of isolation and loneliness. Many Indian families are cautious about forming new friendships. Some feel intimidated by non-Indians. Such feelings are often augmented by separation from the symbols, artifacts and traditions of their own culture, by the absence of persons who can converse in the tribal language, and by independence from the members of their extended kinship family.

6. Conflicting values. Among Indians, employment and self-sufficiency are not valued in the same way as they are by the majority society.

7. Hostility. Competition and the resolution of issues through hard negotiation are considered acceptable behaviors within the majority social/cultural value system; but Indians deal with conflict and aggression differently, frequently exhibiting a type of repressed hostility.[42]

These various findings are based upon observation of Mountain-Plains students at entry, as well as on their performance on the 16PF and the POI as compared with normal rather than clinical populations. In many ways, this profile is a bleak one, suggesting high resistance to change and considerable apathy. However, other factor analytic research at Mountain-Plains[43] suggests that entering students have a strong desire to enhance their capabilities in the following areas:

1. Interpersonal and emotional development, and development of curiosity
2. Occupational training and development of moral values
3. Problem-solving skills, vocational awareness, and financial knowledge and skills.
4. Foundation education (i.e., mathematics and communication skills) and general education (e.g., GED preparation).

Few students place high value on learning about government or on participating in physical education and recreation.

In essence, while the typical student manifests a variety of developmental problems, his or her reasons for being at Mountain-Plains are task specific and focus upon correcting those problems. Though they often lack the capability to cope with their problems, most students apparently recognize how certain personal or family characteristics inhibit their progress toward stable employability or an effective life.

THE MOUNTAIN-PLAINS EXPERIENCE

Objectives

A systems approach to educational or personal development requires that student objectives be clearly specified and that a process be implemented to determine whether objectives are being met. Mountain-Plains meets both these requirements.

Measurement of baseline student behavior begins with the administration at program entry of the POI, the 16PF Form C, and the Adult Problem Inventory (API). Based on results, a Developmental Profile Form is established. Just prior to program completion, the same instruments are readministered. Pre-posttest comparisons indicate students' relative gains toward meeting each counseling objective.

Observations regarding student progress counseling objectives are recorded on Developmental/Employability Traits (DET) forms that are completed every six weeks by various instructors who have direct contact with students. The DET forms, followup verbal contacts and counselors' observations constitute the bulk of the behavioral monitoring system.

Though specific criteria are used to determine whether the student has met completion standards, no valid way of ascertaining proficiency in affective development exists. For example, is a participant's self-concept at Level 1 or Level 12, and what does each imply? What level of self-concept is necessary for success in carpentry? In accounting? Determining the point of program completion for different individuals is infinitely more complex than can be portrayed through this cognitive grade level example. Therefore, a student's attaining all terminal performance objectives is not a sufficient criterion for counseling validation. In fact, counseling objectives could more properly be called terminal performance ideals. The major research questions for Mountain-Plains include What level of objective attainment will permit successful job performance? and, Which objectives are most crucial to success in different jobs? The nature of these questions exemplifies the futility in attempting to separate program and product evaluation. Even a preliminary attempt to answer these questions can be of significant assistance to potential replicators of the Mountain-Plains program as well as to persons conducting research on the psychology of work.

For the present, taking into account that incoming Mountain-Plains students represent the gamut of affective developmental levels, the following completion criteria are established for Counseling:

1. Did the student attend his or her scheduled counseling classes and individual sessions?

2. In your best professional judgment, is there at least a 75 percent probability that the student's emotional development will permit him or her to secure and retain employment?

The following section presents a list of Mountain-Plains' counseling objectives. Components with primary and auxilliary responsibility for helping students attain these objectives are noted. In addition, measurement criteria for each objective are specified.

The following instruments are used in measuring student attainment of various objectives:

1. Adult Problem Inventory (API). Four experimental scales derived from the Participant Inventory, Form B items.
2. Personal Orientation Inventory (POI). An instrument developed by Shostrom for measuring variables related to self-actualization.[44]
3. Sixteen Personality Factor Questionnaire (16 PF Form C Version). An instrument developed by Cattell based on factor analysis methods. A complete and comprehensive measure of personality.
4. Developmental/Employability Trait Form (DET). A list of the major Counseling and Career Guidance objectives with definitions and defined response categories tied to employability. Routinely completed on every student (every six weeks) by instructional staff for the information of the Counseling and Career Guidance Departments.

Specific Counseling Objectives

1. Self-Concept

   The feeling that one is a worthwhile person.

   Attainment

   - Major responsibility for attainment: Counseling
   - Others responsible for attainment: All staff

   Measurement

   - Major responsibility for measurement: Counseling
   - Others responsible for measurement: All staff
   - Measurement Criteria, instrumented:

     (a) Self-Regard Scale, POI

   - Measurement Criteria, behavioral observation via DET:

     (a) Manifests good grooming habits
     (b) Demonstrates eye contact

(c) Shows ease in verbalizing
(d) Takes pride in work
(e) Demonstrates ability to identify personal strengths
(f) Offers positive verbalizations about self.

2. Self-Acceptance

The ability to deal openly and honestly with one's strengths, weaknesses and abilities without overtones of egotism or self-pity. In brief, acceptance of self-knowledge.

Attainment

- Major responsibility for attainment: Counseling
- Others responsible for attainment: All staff

Measurement

- Major responsibility for measurement: Counseling
- Others responsible for measurement: -----

- Measurement Criteria, instrumented:

  (a) Self-Acceptance Scale, POI
  (b) Acceptance of Aggression Scale, POI

- Measurement Criteria, behavioral observation via DET:

  (a) Selects realistic career goals (with respect to abilities)
  (b) Accepts and contracts reasonable programmatic time frames with respect to abilities
  (c) Holds realistic salary expectations with respect to abilities and training.

3. Personal Responsibility

Acceptance of the fact that one's condition/situation is invariably the direct result of one's own actions/ responses. No observed tendency to blame others or blame self in self-pitying fashion. Acceptance of responsibility and capacity to learn from a situation. Evidence of self-directedness, as opposed to dependence for direction on others.

Attainment

- Major responsibility for attainment: Counseling
- Others responsible for attainment: All staff

Measurement

- Major responsibility for measurement: Counseling
- Others responsible for measurement: All staff

- Measurement Criteria, instrumented:

  (a) General Adjustment Scale, POI

- Measurement Criteria, behavioral observations via DET:

  (a) No accusatory verbalizations (making others responsible for current problems)
  (b) Absence of self-pitying verbalizations
  (c) Actions directed toward solution of problem (as opposed to mere talk about the problem).

4. Self-Confidence

The feeling that one has abilities and can reach realistic objectives by employing those abilities.

Attainment

- Major responsibility for attainment: Instructional areas (via reinforcement of accomplishments)
- Others responsible for attainment: Counseling

Measurement

- Major responsibility for measurement: Counseling
- Others responsible for measurement: Instructional areas

- Measurement Criteria, instrumented:

  (a) Personal Confidence Scale, API
  (b) "O" Scale (self-assurance), 16 PF

- Measurement Criteria, behavioral observation via DET:

  (a) Accepts new assignments with little or no hesitation
  (b) Applies old learning to new tasks.

5. Dependability/Reliability

The ability to consistently do that which is expected or required, particularly in regard to work or classroom performance.

Attainment

- Major responsibility for attainment: Instructional areas
- Others responsible for attainment: Counseling

Measurement

- Major responsibility for measurement: Instructional areas
- Others responsible for measurement: Counseling

- Measurement Criteria, instrumented:

  (a) "Q_3" Scale (control), 16 PF

- Measurement Criteria, behavioral observations via DET:

  (a) Is punctual
  (b) Works well without supervision
  (c) Manages money well (e.g., budgets income, pays debts).

6. Self-Knowledge

A felt understanding of one's own abilities, action tendencies, aspirations and limitations.

Attainment

- Major responsibility for attainment: Career Guidance and Counseling
- Others responsible for attainment: Instructional areas

Measurement

- Major responsibility for measurement: Counseling
- Others responsible for measurement: -----

- Measurement Criteria, instrumented:

  (a) Feeling Reactivity Scale, POI
  (b) General Adjustment Scale (men), API

- Measurement Criteria, behavioral observations via DET:

  (a) Develops realistic career goals
  (b) Seeks help before "explosions" when he/she cannot handle a problem
  (c) Lists and discusses personal strengths and weaknesses.

7. Intimacy

The ability to establish meaningful interpersonal relationships with family and friends.

Attainment

- Major responsibility for attainment: Counseling
- Others responsible for attainment: -----

Measurement

- Major responsibility for measurement: Counseling
- Others responsible for measurement: Instructional areas

- Measurement Criteria, instrumented:

  (a) Capacity for Intimate Contact Scale, POI
  (b) Time Competence Scale, POI

- Measurement Criteria, behavioral observations via DET:

  (a) Spends time with spouse and family
  (b) Has reputation as a "good friend" among friends and associates
  (c) Manifests little evidence of marital conflict.

8. Inner-Directedness (Inner Locus of Control)

The belief that one can choose one's work and plan and influence the direction of one's own future.

Attainment

- Major responsibility for attainment: Counseling and Planning
- Others responsible for attainment: Problem Solving, Career Guidance, all staff

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Measurement

- Major responsibility for measurement: Counseling
- Others responsible for measurement: -----

- Measurement Criteria, instrumented:

  (a) "Q_2" Scale (self-sufficiency), 16 PF
  (b) Inner-Directedness Scale, POI

- Measurement Criteria, behavioral observations via DET:

  (a) Sets plans for post-Mountain-Plains life
  (b) Takes responsibility for contacting planner/advisor when plan revisions are needed
  (c) Takes active part in developing own plan.

9. Social Contact Skill

The ability to interact with persons and institutions in ways that fulfill the individual's needs without harming other persons or impeding fulfillment of institutional roles.

Attainment

- Major responsibility for attainment: All areas
- Others responsible for attainment: All areas

Measurement

- Major responsibility for measurement: All areas
- Others responsible for measurement: All areas

- Measurement Criteria, instrumented:

  (a) General Adjustment Scale, API

- Measurement Criteria, behavioral observations via DET:

  (a) Deals effectively with other participants
  (b) Deals effectively with program staff
  (c) Deals effectively with local social service/law enforcement agencies
  (d) Participates in interaction among counseling groups.

10. Marital/Family Management (Marital Stability)

The ability to function, interact and grow as a family group with shared goals, affectionate understanding, trust and constructively managed conflict.

Attainment

- Major responsibility for attainment: Counseling and Community Development
- Others responsible for attainment: Leisure Skills/ Recreation

Measurement

- Major responsibility for measurement: Counseling
- Others responsible for measurement: -----

- Measurement Criteria, instrumented:

  Major:
  (a) Satisfaction with Wife Scale (males), API
  (b) Marital Adjustment Scale (females), API
  (c) Capacity for Intimate Contact Scale, POI

  Other:
  (a) Spontaneity Scale, POI
  (b) Scale I, API

- Measurement Criteria, behavioral observations via DET:

  (a) Resolves major arguments with spouse
  (b) Enjoys doing things with the family
  (c) Shows consideration to spouse in public.

11. Self-Control (Emotional Stability)

The ability to appropriately express and channel one's feelings and impulses when inappropriate or instantaneous expression would impede achievement of long-range, higher order goals or objectives.

Attainment

- Major responsibility for attainment: All areas
- Others responsible for attainment: All areas

Measurement

- o Major responsibility for measurement: Counseling
- o Others responsible for measurement: Instructional areas

- o Measurement Criteria, instrumented:

  (a) "Q_3" Scale (control), 16 PF
  (b) "C" Scale (emotional stability), 16 PF
  (c) General Adjustment Scale, API

- o Measurement Criteria, behavioral observations via DET:

  (a) Controls inappropriate emotional outbursts
  (b) Uses sick time appropriately
  (c) See also objectives 5 and 8, Dependability and Directedness.

12. Alcohol Problem Resolution

The ability to refrain from abusing alcohol or allowing it to become a detriment to personal or family functioning.

Attainment

- o Major responsibility for attainment: Counseling
- o Others responsible for attainment: All staff

Measurement

- o Major responsibility for measurement: Counseling
- o Others responsible for measurement: All staff

- o Measurement Criteria, instrumented:

  (a) Alcohol Problems Scale, API

- o Measurement Criteria, behavioral observations via DET:

  (a) Avoids arguments with spouse and friends while drinking
  (b) Eliminates hangovers
  (c) Avoids spending a disproportionately large amount of money on alcohol
  (d) Reduces time spent at drinking establishments.

13. Flexibility (Values)

The ability to apply values and to reach functional compromises in conflicts with friends, family, co-workers and employers.

Attainment

- Major responsibility for attainment: Counseling
- Others responsible for attainment: All staff

Measurement

- Major responsibility for measurement: Counseling
- Others responsible for measurement: All staff

- Measurement Criteria, instrumented:

  (a) Outgoing Scale, 16 PF
  (b) Existentiality Scale, POI

- Measurement Criteria, behavioral observations via DET:

  (a) Openness and flexibility in considering possible solutions
  (b) Ability to see another person's point of view.

Organization and Functions

Few precedents to the Mountain-Plains counseling services exist; without a specific guide to follow, the focus and procedures of those services have had to develop through a process of experimental evolution. Initially, there was lack of specificity about program directions, content, or staffing requirements. Distinctions among the roles of counselors, family life workers and other staff members had not been clearly drawn. How Counseling fit into the total Mountain-Plains program--e.g., as a referral source for remediation, or a personal and family development program--was unclear.

During the past three years, however, the needs to which the Counseling program must respond and the ways in which it could best do so have been clarified. Both needs and strategies for meeting needs were identified through interviews with counselors, students, and staff about student problems to which Counseling should attend; analyses of program mistakes and failures; and a review of counseling approaches which might be adapted to the Mountain-Plains student population.

Throughout its history, the ultimate employability of the student has been the primary goal of the Mountain-Plains Counseling program. However, it is assumed that employability requires more than possession of technical skills. Psychosocial and personality variables receive equal emphasis. The present Counseling program focuses on developmentally facilitating social contact skills, self-confidence/self-concept, marital communication and personal responsibility. Implicit in such emphases is the realization that occupational maladjustment can adversely affect one's family life, diminish an individual's feelings of worth and competence, and lead to a negative self-concept and irresponsible behavior.

Organizationally, Counseling is one component within the Student Services Division. The component is staffed by a supervisor, five counselors, one counseling aide and a receptionist. The supervisor reports directly to the coordinator of Student Services, who is also responsible for the Career Guidance and Community Development and Recreation components.

Each counselor carries a case load of 30 to 35 students, depending primarily upon his or her special areas of expertise. The Counseling component provides personal, family and marital counseling. Vocational counseling is referred to Career Guidance. Most counseling is conducted in group sessions, although individual counseling is provided to meet specific needs.

Counseling staff are available to students throughout the course of their stay at Mountain-Plains. The nature and frequency of the contact depends upon an individual's personal needs and goals. Some students attend only three or four sessions; others attend sessions weekly until just prior to program exit.

Immediately upon entry, all students go through a group orientation in which the role of Counseling is explained. In particular, students are made aware of the importance of problem resolution and personal/interpersonal skill development in relation to career success. At this point, each student family is assigned to a professional counselor. Family members meet with that counselor in a private session. The counselor explains the objectives of the Counseling program and the various treatment options available. A treatment cycle is then negotiated with each student. Counseling is mandatory for both head of household and spouse; the service is available to children or to the family as a unit at the family's discretion. Occassionally, children are referred from the Child Development Department or one of the local schools. Counselors are frequently concerned with improving parent-child relations, or encouraging parents to assume greater responsibility for their children's behavior.

Based upon the philosophy that individuals know their own needs and problems best, each student is given a voice in determining what sort of counseling program he or she will follow (e.g., group or individual counseling). The counselor's expertise in techniques for facilitating problem resolution and personal development is applied in putting together a counseling program likely to be of maximum benefit to the student.

The Counseling component emphasizes a developmental and eclectic approach to meeting student needs. A wide range of treatment options is provided. Counselors use Glasser's Reality Therapy and Ellis' Rational Emotive Therapy to help students develop responsibility for personal behavior. They use Transactional Analysis (TA) with problem drinkers. Gestalt Therapy, client-centered approaches, and biofeedback are used in resolving various other problems. Specialized counseling programs are available for groups of people who share a common problem--e.g., a Weight Control Group, and Alcohol Problem Group.

Unless a personal problem is so severe as to warrant immediate treatment, the negotiated counseling program typically begins during the fourth or fifth week of residence at Mountain-Plains. In addition to the theoretical emphases and areas of concern previously identified, students can select from the following:

1. Individual counseling, spouses apart

2. Individual counseling, spouses together

3. Regular group counseling, spouses together

4. Regular group counseling, spouses apart

5. Special group counseling, either with or apart from spouse.

Approximately 75 percent of the students choose the cognitive development (regular) group cycle consisting of seven to nine one and one-half hour sessions devoted to problem-solving, goal setting, and strength identification. The remainder choose individual or special group counseling, with the most frequent focus on marital problems.

Regular groups typically consist of eight participants, who meet weekly with a counselor to work toward the following program goals:

1. To support participants in adjusting to their new environment

2. To provide a vehicle for clarifying and setting priorities

3. To teach interpersonal skills helpful in establishing harmonious family life and constructive working relationships

4. To teach group interaction skills useful in other group situations (e.g., participant council, PTA)

5. To help participants gain a realistic self-image through feedback from group members

6. To provide a screening and referral source for persons needing more intensive or specialized counseling.

Counselors attempt to remain flexible, to use whatever approach works best in resolving various student problems. Most counseling takes place in counseling offices, but some is conducted in homes or in other program facilities.

At the end of a counseling cycle, the counselor and student examine the student's behavioral accomplishments, using completed Developmental/Employability Traits (DET) forms as the basis for judgments. Any additional input from instructors in regard to the student's progress is also considered. The counselor and student either agree that the student's accomplishments are sufficient to ensure employability--in which case the student is validated (scheduled out of counseling)--or problems needing further treatment are identified and a new treatment cycle is negotiated. Students who validate counseling may request further counseling, and provided counselors are available, such services are provided.

Though Counseling provides the primary vehicle for attaining personal development, other divisions and components have related objectives. Following are some examples.

1. Career Guidance Component
    - To conduct formal and informal consultations concerning students
    - To coordinate case and team conferences
    - To provide student referrals
    - To provide in-service training
2. Controller's Services Division
    - To conduct formal and informal consultations
    - To coordinate case and team conferences
    - To provide student referrals
    - To distribute DETs
    - To schedule students into counseling

3. Educational Services Division

   - To conduct formal and informal consultations
   - To coordinate case and team conferences
   - To provide student referrals
   - To provide in-service training

4. Research Services Division

   - To coordinate research activities and projects
   - To coordinate affective testing (Research Services administers tests; Counseling scores tests and provides Research Services with coded test results)

5. Community Development and Recreation Component

   - To conduct formal and informal consultations
   - To provide student referrals

6. Placement Component

   - To provide counseling employability reports after receiving instructor employability reports
   - To offer assistance in job placement

In addition to the internal interaction with other components and divisions, Counseling maintains ongoing informal relationships with the following outside agencies:

- Valley County Mental Health Clinic (Glasgow, Montana)
- Program Research Institute (Out-patient medical facility on base)
- Glasgow Public Schools
- Rehabilitation Service
- Base Security and Law Enforcement
- Social Services

Efforts and Results

As a program grows from inception to maturity, initial problems are resolved, and others emerge to take their place. In reviewing Mountain-Plains' history, the following major categories of concern seem most significant.

1. Objectives. Preliminary counseling objectives were poorly defined, and many were inappropriate for the target population. In rewriting and prioritizing objectives, Mountain-Plains staff learned it is impossible to make one standard set of objectives which is appropriate for everyone. It is essential to treat each person and family individually. Objectives do, however, serve as a guide to the types of staff expertise needed, and the procedures which must be implemented in providing services.

2. Measurement. Valid measures of student psychological characteristics, problems, or progress suitable for use with the target population did not generally exist. Mountain-Plains staff found it necessary to develop or adapt suitable measures.

3. Instructional Staff. Initially, instructional staff lacked a general understanding of the nature and role of counseling. Many tended to regard counselors as miracle workers or disciplinarians. Mountain-Plains staff quickly recognized that ensuring teachers' understanding of counselors' objectives and roles is necessary to effective referral.

4. Spouses. In Mountain-Plains' experience, it is often difficult to persuade spouses of the importance of counseling services. Wives often fail to attend counseling sessions because of real or alleged child care problems. It is now generally felt that the importance of all family members' participating in counseling should be more strongly emphasized during orientation.

5. Staffing the Counseling Component. In selecting counselors, it is important to consider skills, as well as potential for development and personal integration. Academic accreditation has not proven to be a predictor of success at Mountain-Plains. The most valid predictor, apart from sophisticated assessment through personal interview, has been the recommendations of previous associates or supervisors.

6. Use of Professional versus Paraprofessional Counselors. Mountain-Plains' experience suggests that no relationship exists between academic qualifications and counseling effectiveness. Rather, the attitude with which persons approach their work determines their professionalism, and their interpersonal effectiveness determines their success. Mountain-Plains has quite accurately predicted counselors' success according to their 16 PF scores, using Cattell's specification equations for school counselors, and calculating both males' and females' scores with the male equation. The POI has proven less successful as a basis for such predictions.

7. Use of Specialists. Mountain-Plains tried using a separate therapeutic specialist to address each specific problem--e.g., drug and alcohol abuse, marital discord. This approach proved ineffective largely because many problems overlapped. It seems more practical for staff members to serve as consultants in special areas of expertise, but to have the capability to provide general counseling services responsive to a wide range of problems.

8. Leadership in Program Development. Leadership has been of primary importance in both Counseling and Career Guidance. At Mountain-Plains, expertise in needs analysis, program design, staff in-service training and program administration have proven the most important qualifications for effective leadership. It is speculated that a person committed exclusively to one particular field (e.g., clinical psychology, social work, rehabilitation, school counseling) can develop only limited potential because many other fields remain virtually unexplored. Successful program developers seem to be pragmatic eclectics who can take a broad view, who are willing to accept empirical results, and who continually evaluate the effects of their attempts, objectively reviewing negative as well as positive results.

9. Home-Based Counseling. Initially, Mountain-Plains staff felt that family counseling should be conducted in the home. This approach necessitated the location of counseling offices in housing areas, and the majority of counseling occured in students' homes after regular classroom hours. Home-based counseling proved unsuccessful however, for several reasons. Students were too tired after attending a full day of classes to be interested in or benefit from counseling sessions. Since this was often the first time families had been together during the day, the counselor's presence was frequently regarded as an intrusion. Home-based counseling has

been largely abandoned, therefore, in favor of the use of central facilities.

10. Exclusive Individual Approach. Initially, individual counseling was the favored approach, with very few group sessions being conducted. In addition, counseling was generally provided only in response to specific problems. However, growing awareness that virtually all students needed personal development counseling led to a general expansion of component services, including group orientation and increased flexibility in options for negotiated treatment.

11. Initiation of Counseling Activities. Originally, students did not attend their first counseling session until their sixth or seventh week of residence. But because students seemed most susceptible to personal change and growth immediately upon program entry, it was determined that the earlier a counselor was assigned to an incoming student and the counseling process begun, the more effective that counseling would be. The practice of assigning counselors immediately to incoming students seems to increase students' receptivity to counseling, and also provides more time for completing a negotiated treatment cycle.

Several recent studies have indicated the effectiveness of group counseling. In one study, 17 families were randomly assigned to spouse-together and spouse-apart groups, in which they experienced 16 90-minute treatment sessions focusing upon the Minnesota Couples Communication Program (MCCP). Success criteria in this study were improved self-concept and acceptance of others as measured by the Berger Self-Acceptance Scale. Both groups showed significant improvement on each acceptance variable, leading the authors to conclude that the MCCP is an effective vehicle for improving self-concept and acceptance of others in both spouse-together and spouse-apart treatment settings.[45]

Another study examined the effectiveness of theme-centered group counseling in improving the self-concepts of disadvantaged adults. The impact of a cognitive cycle treatment on self-concept and identity formation was compared to that of a Rational Behavioral approach. The effects of each were measured by the Time Competence, Inner-Directedness, Existentiality, Self-Regard, and Self-Acceptance scales of the Personal Orientation Inventory (POI). Both the cognitive cycle treatment and the Rational Behavioral approach significantly and positively affected students' self-concepts. However, score differences ($p \leq .05$) indicated that the Rationale Behavioral approach was more effective than the cognitive cycle treatment in increasing (1) Inner-Directedness, (2) Existentiality and (3) Self-Acceptance. No statistically significant differences were found in relation to Time Competence or Self-Regard.

At the end of this chapter, various research questions which are being addressed or need to be addressed are identified.

CAREER GUIDANCE

CONCEPTUAL BOUNDARIES

The Broader Meaning and Significance of the Subject

During the past two decades, the theoretical framework underlying career guidance programs has been significantly influenced by a growing knowledge of and speculation about vocational development. Only a combination of theories can explain to any extent the attitudes, knowledge and skills which contribute to or impede vocational awareness, decision making, and career identity. As Katz observes, "The foundation for a theory for intervention should include some understanding of the phenomena with which the intervention is concerned."[46]

According to Herr and Cramer[47] vocational development theories can be classified into five broad categories:

1. Trait-and-factor approaches, which emphasize identification and measurement of individual trait differences--e.g., aptitudes, interests, values, temperaments--and the use of these traits in predicting occupational choice, job satisfaction and adjustment, and so on.

2. Psychological approaches, which stress internal motivational variables--e.g., needs and values--and emphasize self-gratification as an important variable in choosing an occupation.

3. Decision approaches, which rest upon the economic principle of supply and demand, assuming that individuals generally choose occupations which are likely to maximize their gains in terms of money, prestige and security.

4. Sociological approaches, which emphasize the importance of such factors as community attitudes, family values, school climate, social class expectations and other environmental belief systems that influence persons in selecting occupations.

5. Developmental approaches, which stress life-long vocational development which can be conceptualized according to the developmental tasks important at different life stages.

The Mountain-Plains Career Guidance program has been influenced primarily by a developmental approach, in which the importance of a favorable self-concept and careful evaluation of possible career options are stressed. Mountain-Plains subscribes to the philosophy that vocational development can continue, or be delayed or impaired,[48] depending upon the economic, physical, and psychological situations an individual experiences. Such approaches identify the types of developmental tasks which a persons needs to perform in order to move toward vocational maturity. For example, Super, et al.,[49] have identified the following as essential components of adolescence, and prerequisite to becoming a young adult with appropriate maturity to choose, prepare for, and adjust to an occupation. Specifically, individuals must develop--

1. Awareness of the need to set occupational goals.
2. Ability to use resources effectively.
3. Awareness of what factors to consider in choosing a vocation.
4. Awareness of contingencies which may affect vocational goals.
5. Ability to differentiate between interests and values.
6. Awareness of present-future relationships.
7. Ability to formulate a general preference.
8. Consistency of preference.
9. Knowledge of the preferred occupation.
10. Ability to plan for the preferred occupation.
11. Vocational preference based on knowledge.
12. Ability to focus on a specific vocational preference.

Identifying such developmental tasks provides a basis for creating exercises and experiences by which students can develop the capabilities to complete each task. In this manner, the group exercises and learning activity packages formulated for use in Mountain-Plains' Career Guidance program were developed.

Inherent in any development approach to vocational development is the notion of using career guidance as an agent of stimulation. Within this general context, Ginzberg labeled these periods of vocational development: fantasy, tentative, and realistic.[50]

With the exception of fantasy, each period is reducable to substages. The tentative period has substages of interest, capacity, values and transition; the realistic period consists of exploration, crystallization and specification.

As indicated previously in his longitudinal Career Patterns Study, Super outlined various developmental tasks to be accomplished during the various stages of an individual's vocational development.[51] These stages include--

1. A growth stage, with prevocational, fantasy, interest and capacity substages.

2. An exploration stage, which reduces to tentative, transition, and trial substages, the tentative substage incorporating the developmental task examples cited previously.

3. An establishment stage, with trial and stabilization substages.

4. A maintenance stage.

5. A decline stage, with deceleration and retirement substages.

One major principle underlying this approach is an insistence on the interaction between personal and environmental variables. In other words, individuals tend to choose an occupation which will afford an opportunity for self-expression.

In summary, Ginzberg and Super provide a conceptual outline of typical behaviors which mark vocational development. They provide a basis for implementing a career guidance model by indicating--

1. The tasks to be focused upon.

2. The time at which those vocational development tasks are to occur.

3. The numerous decisions which occur during an individual's vocational development.

Accordingly, Mountain-Plains' Career Guidance objectives draw extensively upon these theoretical postulations.

Boundaries for Analyzing the Subject

The student characteristics which influence Counseling also affect Career Guidance. Since they have been cited earlier in this chapter, they will not be repeated here. However, it is important to note those characteristics directly attributable to the unemployed or underemployed status which all entering Mountain-Plains students share.

Apart from certain distinguishing demographic characteristics, disadvantaged persons are likely to display--

1. Low math and English language capabilities.
2. No specific saleable vocational skill.
3. A poor self-image.
4. Lack of knowledge about employment opportunities.
5. Poor health habits.
6. Little sophistication as consumers.
7. Alienation from society.
8. Poor interpersonal skills.
9. Lack of sophistication regarding the world of work (e.g., little skill or experience in dealing with employers, applying for a job, requesting a promotion).

Career Guidance essentially focuses upon improving self-image, providing knowledge of job opportunities, enhancing interpersonal skills, and increasing sophistication regarding the world of work. Decreased alienation from society and development of saleable vocational skills usually accompany these initial changes. Other program components deal specifically with improvement in basic skills, health habits and consumer education.

Career Guidance activities are based on two underlying assumptions:

1. Such problems as malnutrition, indecisiveness, psychological disturbance, drug/alcohol abuse, and marital discord--while deserving of treatment--are symptoms of arrested personal, social and technical development, not causes.

2. Student needs relating to changes in attitudes and development of knowledge and skills can be planned for and developmentally facilitated in a career guidance program which focuses upon--

    o Assisting students in discovering their vocational abilities, values and interests and using these discoveries in making occupational choices.

- Encouraging the development of productive employee traits and attitudes.
- Providing timely information concerning specific careers and the world of work in general.

THE MOUNTAIN-PLAINS EXPERIENCE

Objectives

In keeping with the systems approach to career education favored by Mountain-Plains, Career Guidance has identified program goals, behavioral objectives for students, criteria and instrumentation for evaluation. All are specified in Figure 2, beginning on page 100. Goals 1, 2, 3, and 4 encompass the Awareness, Exploration and Reality-Testing stages of the Mountain-Plains Career Guidance program; Goal 5 concerns the World of Work stage.

It is important to distinguish between objectives and goals. Goals allude to general, descriptive statements.[53] For example, the goal most frequently cited by career guidance professionals is "attainment of vocational maturity." Objectives, on the other hand, delineate specific behavioral tasks required to meet the goal.[54]

This distinction is useful in considering Herr's description of a systems approach for the formalization of career guidance objectives:

> The objectives of vocationalization, then, rest upon statements of expectations for students, which in turn necessitate judgment of what individual students ought to be able to achieve and behavioral descriptions of these activities. But it is also important to recognize that for optimum effect, vocationalization should be individualized with each student who is able to work on information or who has been exposed to experiences different from other students at any given time. While the literal realization of such a goal may be too much to expect, any attempt to aid vocationalization systematically requires an emphasis both on diagnosis and on the provision of diverse learning experiences, from which can flow prescriptions for individual progress. The point is that it is not enough simply to say to

> a student, be vocationally mature. If this is what we want him to become, he needs to understand what being vocationally mature means, what the consequences of vocational maturity are, how he becomes vocationally mature, and what opportunities must be available to him to aid such effort. In essence a systems approach to vocationalization at its best would represent an unbroken continuum of experiences planned with and for the individual student which takes him wherever he is and moves him progressively toward the goal of vocational maturity by mustering all the resources and persons that are available to help toward such an end.[55]

In establishing Career Guidance objectives at Mountain-Plains, developmental tasks delineated by Super and Ginzberg were used to identify behaviors required for vocational maturity, and the sequence in which those behaviors should occur. However, program objectives and evaluation criteria are derivations from--rather than a direct reflection of--the Super-Ginzberg approach.

Figure 2
SPECIFIC CAREER GUIDANCE OBJECTIVES

GOALS	OBJECTIVE	CRITERIA	EVALUATION
1. Awareness of the many factors to be considered in selecting a career.	1. Identify the purpose and goals of Career Guidance. 2. List, identify and explain the resources in the Career Information Center. 3. Identify the information required for career planning. 4. Identify the major steps in making a career decision.	1. 80% on cognitive test. 2. 80% on cognitive test. 3. 80% on cognitive test. 4. 80% on cognitive test.	Career Maturity Index Completion of Appropriate LAPs.
2. Development of self-awareness regarding personal aptitudes, values, and interests.	1. Identify vocational interests and their relationship to selecting a career.	1. Select the four highest interest clusters as reported by the OVIS. 2. Identify specific occupations found within the high occupational clusters as reported by the OVIS.	Ohio Vocational Interest Survey, Career Abilities Interest and Values Form (CAIV).
	2. Identify vocational needs/values and their relationships to selecting a career.	1. List five needs/values of highest importance as reported by MIQ. 2. List five needs of lowest importance as reported by the MIQ. 3. List five occupations which will satisfy your needs as reported by the MIQ.	Minnesota Importance Questionnaire and CAIV.
	3. Identify your aptitudes and their relationship to selecting a career.	1. Identify your strong aptitudes as reported by the GATB. 2. Identify your weak aptitudes as reported by the GATB.	General Aptitude Test Battery and CAIV. Completion of Appropriate LAPs.

GOALS	OBJECTIVE	CRITERIA	EVALUATION
		3. Identify those occupational aptitude patterns that match your aptitudes.	
	4. Analyze your needs/values, interests and aptitudes and their relationship to selecting a career.	1. List those occupations in which you have ability and interest. 2. List those occupations which will meet your needs/values, abilities and interests.	General Aptitude Test Battery, Ohio Vocational Interest Survey, Minnesota Importance Questionnaire.
3. Develop awareness of career preparation opportunities offered at Mountain-Plains.	1. Identify the Mountain-Plains instructional areas and specific occupations related to each program.	1. List six instructional areas offered at Mountain-Plains. 2. Match selected occupations with instructional areas. 3. 80% on cognitive test.	Completion of Appropriate LAPs.
4. Explore and understand career opportunities	1. List major duties of your selected career.	1. List five major duties of your selected career. 2. List duties which would be enjoyable. 3. List duties which would be unenjoyable.	Completion of Appropiate LAPs.
	2. Identify the training requirements of your selected career.	1. List four general training requirements of your career. 2. Describe how to obtain training for your selected career. 3. Check the type of training required for your selected career.	

GOALS	OBJECTIVE	CRITERIA	EVALUATION
	3. Analyze the employment and working conditions of your selected career.	1. Indicate a preference for employment setting, and working hours for your selected career. 2. List three types of employee benefits for your selected career.	
	4. Identify the physical demands of your selected career.	1. Identify ten physical requirements for your selected career. 2. List physical limitations which may affect your selected career.	
	5. Analyze the employment opportunities of your selected career.	1. Describe the employment opportunities of your selected career. 2. List two factors which may change the demand for your selected career.	
	6. Specify the average salary within your selected career.	1. List the salary range for your selected career. 2. Specify the average salary within your selected career. 3. Examine your personal and family needs in relation to the salary provided in your selected career.	
	7. List the course requirements for your selected career.	1. List all course units for your selected career. 2. List Math level requirements for your selected career.	

GOALS	OBJECTIVES	CRITERIA	EVALUATION
		3. List Communication level requirements for your selected career. 4. List time period required to complete training in your selected career.	
	8. Select a career.	1. Select a career available at Mountain-Plains.	
5. Demonstration of behaviors and skills required to obtain and maintain employment.	1. List techniques involved in selling your knowledge, skills and experience to a prospective employer.	1. List the first step required in merchandising your talent. 2. List nine items to consider when preparing an inventory chart. 3. List two sources to be used in finding employment. 4. List three situations in which a letter of application is necessary. 5. List six guidelines to follow when writing a letter of application. 6. List eight sources of job information. 7. List two suggestions which will assist you in your job search. 8. Analyze techniques required for a successful job interview. 9. 80% on cognitive test.	Completion of Appropriate LAPs.

GOALS	OBJECTIVES	CRITERIA	EVALUATION
	2. Prepare a neatly typed, readable resume which will be used for job placement.	1. List personal data. 2. List date of availability. 3. List employment objectives. 4. List education and training. 5. List previous employment. 6. List military experience, if applicable. 7. List present interests and activities. 8. List references.	
	3. Prepare a Personal Records Booklet to be used for employment applications.	1. List personal and family history. 2. List references. 3. List education. 4. List employment history.	
	4. Complete a job application form. (This form will be of such quality as to be acceptable to a prospective employer in the role-playing interview.)	1. List personal history. 2. List previous employment. 3. List educational preparation. 4. List personal references.	
	5. Analyze the importance of personal appearance and grooming for job interviews.	1. Satisfactory rating on the dress and grooming section of the Job Interview Evaluation Form.	Job Interview Evaluation Form.
	6. Answer questions and exhibit behaviors desired for a successful job interview.	1. Satisfactory rating on all scales of the Job Interview Evaluation Form.	Job Interview Evaluation Form.

GOALS	OBJECTIVE	CRITERIA	EVALUATION
	7. Demonstrate those performance, conformance and dependability behaviors desired to maintain employment.	1. Satisfactory evaluation by career guidance and instructional staff.	Minnesota Satisfactoriness Scale. Responsibility Index.

Organization and Functions

One might expect that career guidance would constitute the core of a career education program. Yet the development of such a program for rural disadvantaged families is as bereft of prototypes or precedents as the Mountain-Plains counseling services. Indeed, development of the Mountain-Plains Career Guidance component has been characterized by continual trial and refinement.

The initial focus was on staffing, identifying program segments, purchasing career materials, and developing Learning Activity Packages. During this period the sole theoretical emphasis was on trait and factor analyses--assessing student abilities and interests and helping students choose career preparation programs commensurate with those abilities and interests. As the component matured, two major subcomponents gained individual identities: Awareness-Exploration and World of Work. Both subcomponents underwent formal programmatic development and refinement. Awareness-Exploration discarded a trait and factor analysis approach in favor of a concentrated vocational development approach emphasizing evolutionary vocational decision making. Learning Activity Packages were designed to assist students in examining the multiple factors related to changing or choosing a career. Group and individual guidance activities were designed to develop skills--e.g., personal self-awareness and value clarification--necessary in making viable career decisions.

World of Work was redesigned when evaluation revealed that many students lacked the necessary skills to obtain and maintain employment. The resulting reorganizational effort emphasized role playing to eliminate dysfunctional vocational behaviors. Through techniques like role playing, students have learned to exhibit behaviors required for a successful interview, and to develop attitudes more conducive to successful interaction with employers and fellow employees.

Organizationally, Career Guidance is a component of the Student Services Division. The staff complement includes a supervisor, four career guidance specialists, one career guidance aide and one stenographer. Each Career Guidance specialist serves approximately 30 families either in the Awareness-Exploration segment or the World of Work segment. The supervisor of Career Guidance reports directly to the coordinator of Student Services who is also responsible for the Counseling Services Department and the Department of Community Development and Family Services.

Career Guidance staff work with students throughout their residence at Mountain-Plains to assist them in developing skills necessary to personal decision making and occupational adjustment.

Prior to Awareness and Exploration, an orientation meeting is conducted for incoming students. At this time, students are introduced to the content and process of Career Guidance. This introduction is designed to facilitate group rapport, and alleviate the anxiety of entering a new program. The following topics are normally covered in orientation:

1. The objectives of career guidance
2. The specific content and activities of Awareness and Exploration, including a general description of Learning Activity Packages (LAPs), group guidance activities, and an introduction to the Career Information Center
3. World of Work objectives
4. The purposes of the Minnesota Importance Questionnaire (MIQ), Ohio Vocational Interest Survey (OVIS), and General Aptitude Test Battery (GATB).

Following a general discussion, student questions concerning the department are solicited and answered.

Awareness, Exploration and Reality Testing

In the Awareness phase, students are helped in specifying their personal vocational needs, values, interests and ambitions. This is accomplished in group meetings, which are held for two hours per day for three weeks. During this period, Career Guidance staff begin to identify each student's level of vocational development. This in turn determines the student's readiness for different types of assistance, and identifies the developmental tasks the student needs to master. Because low self-esteem is prevalent among the target population, one important aim of the Awareness phase is to assist students in gaining an accurate picture of their personal characteristics and an awareness of their own uniqueness.

Following Awareness, each student enters an Exploration phase in which learning activity packages (LAPs) are provided to help students understand such concepts as career clusters, career laders, worker traits, and job outlook. During Exploration students complete LAPs and attend group guidance sessions aimed at helping them integrate their growing self-knowledge with occupational preparation opportunities at Mountain-Plains. Students must begin to analyze, organize, and synthesize specific information relative to careers in which they may be interested. Exploration calls upon students to make many small decisions all leading up to a final career selection.

The LAPs used in Career Guidance are designed to provide information pertinent to contemporary working conditions. Each LAP includes an outline of objectives, their rationale, and a worksheet to be completed. Completed worksheets are discussed and evaluated by the student and the Career Guidance specialist. Career Guidance LAPs address such areas as--

- Employment and working conditions
- Physical demands
- Mountain-Plains course requirements
- Job forecasting
- Making a career commitment
- Personal grooming
- Merchandising your job talents
- Writing a resume
- Attending a job interview
- Career planning
- Orientation to the resources in the Career Information Center
- Investigating occupational clusters
- Determining vocational interests
- Determining vocational needs
- Identifying attitudes
- Specifying occupational duties
- Identifying training requirements

During Reality-Testing, students visit different Mountain-Plains occupational preparation areas to observe what persons in these areas do, and what specific skills are required. Such experiences assist students in selecting an occupation realistically suited to their interests, abilities, and self-concept. After visiting an occupational area, the student discusses his or her impressions with a Career Guidance specialist, who helps the student develop a vocational preparation plan that meets his or her personal needs.

Career Guidance specialists use both group and individual guidance techniques. Group sessions are useful in disseminating information, developing vocational plans, and increasing self-understanding and self-acceptance. Individual guidance techniques are used to help students personalize career information, thus facilitating an appropriate vocational choice.

World of Work

Approximately 60 to 90 days prior to exiting Mountain-Plains, a student enters World of Work. The World of Work segment of Career Guidance is designed to assist students in developing particular skills and behaviors necessary for obtaining and maintaining employment. Specific guidance activities within World of Work focus on preparing a resume, preparing a personal records booklet for employment, completing a job application form, and being interviewed for a job.

A second World of Work objective is to aid students in developing attitudes which are known correlates of successful employment. Specific areas of concern focus on student performance, conformance, cooperation and dependability.

Students with dysfunctional vocational behaviors attend group counseling sessions in which role playing is the predominant instructional technique. The following sequence of procedures is implemented in role playing:

1. Orientation: Role playing is preceded by an intensive orientation session. Students are given thorough information concerning the rationale behind role playing, role playing objectives and goals, role playing as a process, student and staff expectations, and student objectives.

2. Warm-up: Staff begin each session by encouraging group members to interact with each other in order to provide a relaxed, open atmosphere for subsequent role playing activities. In addition to serving as the group leader, a staff member actually joins in role playing activities. More than one staff member may participate, but a usual group involves six to eight students (often married couples) and one staff member.

3. Problem Presentation: The staff member acknowledges personal problems raised by students and, additionally, elicits further information pertinent to a problem situation. Whenever possible, real problems, rather than invented situations, are used as the basis for role playing activities. This practice is intended to make sessions more useful and relevant.

4. Group Interaction: As problems are introduced and discussed, the staff member attempts to identify those which are most common to the group members. Once a given problem has been selected by group members as the basis for the next activity, the problem presenter becomes the protagonist and the problem serves as the focal point of the role playing scene. Group members are then selected to play the roles of people involved in the situation. Typical roles might include a husband and wife working out a disagreement, or an employer trying to get an employee to see his point of view. A technique frequently employed is role reversal, in which, for example, a husband will

assume the role of his spouse and vice versa; this technique is particularly effective in helping students understand another's perspective.

5. Integration: Following the specific role playing scene, group members are encouraged to discuss their feelings and reveal what they may have discovered about themselves. The staff member reinforces statements which indicate that effective learning has taken place. After the problem situation has been discussed thoroughly, a second problem is identified and the sequence is repeated.

A number of Mountain-Plains program personnel contribute to attainment of Career Guidance objectives--most notably the instructional staff, student advisors, and personal/family counselors. All assist Career Guidance staff in influencing student behavior.

Instructional staff support guidance goals by--

1. Providing students with access to specific information about various occupational training areas.

2. Making use of instructional procedures and settings that simulate the actual conditions of employment (e.g., paying students a stipend based on hours of class attended).

3. Openly discussing with students any dysfunctional attitudes or behaviors which may affect future employment, and making appropriate referral for serious problems.

The Student Advisory Office is primarily responsible for scheduling and for coordinating courses to help students fulfill individualized career plans. Student advisors facilitate attainment of guidance goals by--

1. Discussing with students the results of pretests in light of the competency levels required for their chosen careers.

2. Acting as a referral source for information or advice.

3. Providing information regarding student progress in a chosen career.

The Personal/Family Counseling staff are primarily responsible for stimulating students' personal and emotional development. Counselors promote attainment of guidance goals through--

1. Conducting formal and informal consultations with Career Guidance staff in regard to specific personal behavior problems.

2. Referring students who experience vocationally related problems to Career Guidance staff.

Efforts and Results

Career Guidance has changed even more dramatically than Counseling during Mountain-Plains' history. In that sense, its implementation problems are still emerging. Nevertheless, many of the same problems which beset Counseling services are present in some variations here. They relate to--

1. Objectives. At the outset of the program, Career Guidance followed a trait-and-factor approach primarily designed to assess student characteristics and directively advise students about what occupations they should or should not enter. It seems more effective, however, to attend to students' developmental needs, and to develop program objectives responsive to such needs.

2. Measurement. Valid instruments to measure student progress toward vocational maturity are limited in availability. Moreover, most instruments that assess student development are designed for use with secondary school students rather than a disadvantaged adult population. Mountain-Plains staff found it necessary, in many instances, to adapt or devise criterion measures for various aspects of Career Guidance, notably World of Work.

3. Instructional and Administrative Staff. As Mountain-Plains' developmental, personally oriented Career Guidance program evolved, there was some unclarity about the program's content and purpose among instructors and administrators. Career Guidance personnel therefore found it important not only to refine their own sense of direction, but to communicate regularly with other staff to ensure understanding of Career Guidance goals and procedures.

4. Interaction. Career Guidance goals are central to the mission of the Mountain-Plains program; however, Career Guidance cannot occur in isolation. In Mountain-Plains' experience, effective interaction among Career Guidance personnel, instructional staff and Counseling staff is necessary to the attainment of Career Guidance goals.

6. Program Content. It is one thing to accept a theoretical framework for a program--but another to translate that framework into program content. Mountain-Plains staff learned that creating LAPs and specific group exercises to help students achieve sequential goals requires not only considerable effort but extensive content expertise.

7. Leadership. In Mountain-Plains' experience, theoretical and operational knowledge of existing program content, as well as the ability to help staff develop new program content, are essential ingredients in effective leadership.

Evaluation Data on Career Guidance Effectiveness

Since the desired outcome of Career Guidance is selection of an appropriate career, an evaluation of Career Guidance should assess the consistency of the student's career choice (i.e., with his or her interests and abilities) as well as examine the appropriateness and viability of the guidance process per se. An assessment of this program is, at best, difficult. The basic evaluation tools for the overall career guidance/development program include the following:

1. The Career Abilities, Interests, and Values Form (CAIV). An experimental form for evaluating student self-perceived abilities, interests, and values in regard to their consistency with test scores and professional judgments. The consistency of these variables with the student's career choice is also assessed.

2. The Career Maturity Index: Attitude Scale (CMI). An overall measure of the maturity of career attitudes (developed by Crites, 1973).

3. Performance Evaluations. Performance evaluations on the quality of paper and behavioral products are completed by the Career Guidance personnel.

4. The Responsibility Index. An instrument that measures perceived appropriateness of three worker roles (dedeveloped by Sweeney and Associates, 1972).

In addition, cognitive LAP/unit/course tests are also used to assess mastery of factual content; however, their importance is considered secondary since Career Guidance focuses on appropriate internal changes the individual makes as a result of guidance, and on the individuals' ability to use information in making judgments and choices.

As indicated in the Objectives section, students must meet certain performance criteria in LAPs and in role playing in order to complete the program. Attainment of such criteria constitutes a type of formative evaluation, measuring the effects of different Career Guidance components on student growth.

Summative evaluation poses the question, What happens to students when they complete the Career Guidance program? While relatively little data to answer this question is yet available, there are some preliminary indicators. For example, one follow-up study stratified 24 families who had attended Mountain-Plains into completers and noncompleters.[56] Program entry and performance records were studied to determine behavioral changes among these students. Interestingly, completers' employment rates doubled in comparison to pre-program statistics, and income increased on a linear basis throughout the first year after exit.

More pertinent Career Guidance outcomes are measures of job satisfaction and satisfactoriness as employees. Upon entry, Mountain-Plains students generally report low satisfaction with previous employment and are usually rated as unsatisfactory by employers. Field staff contend that the main problems experienced by entering students are an inability to conform to job requirements, high instance of employer and co-worker conflicts, and poor reliability. However, follow-up studies conducted by Mountain-Plains staff indicated that after the program, male heads of households ranked at or above the 50th percentile on all satisfaction scales on the Job Descriptive Index, a standardized self-report questionnaire which measures satisfaction with work, pay, promotions, supervision and co-workers. Females rank at or above the norm only on pay and promotions, and below the norm on satisfaction with work, supervision, and co-workers.

On the Minnesota Satisfactoriness Scale employed males rank above the norm on most dimensions of employee satisfactoriness--e.g., performance, conformance, and personal adjustment--but below norm on dependability. Employed females rank above the norm on conformance, dependability, and personal adjustment, but below norm on performance. Departing students, male and female, score significantly above entering students on job motivation as measured by the Job Motivation Index.

While the smallness of the sample sizes precludes generalizations, the available data do support the positive impact of Career Guidance on departing students.

LESSONS LEARNED FROM THE MOUNTAIN-PLAINS EXPERIENCE

Tradition

Interdependent Functions

Traditionally, counseling and guidance function in isolation from academic education. With Mountain-Plains population, it seems more appropriate for counseling and career guidance staff to assist students in meeting their individual academic, personal, social and economic needs.

Student Independence

Counseling and guidance functions are traditionally performed in such a way that the students' dependence upon others for information is encouraged. Mountain-Plains' philosophy emphasizes development of initiative. Counseling and Career Guidance staff offer extensive support, but encourage the student to assume responsibility for his or her own life.

Individualized Services

Traditionally, consistent counseling and career guidance services are provided to groups of students without regard for their individual needs. Mountain-Plains supports the use of an individualized, diagnostic-prescriptive approach.

Innovative Developments

Innovations in role playing are not new; however, they are often used as patent exercises with variable applicability to students' personal situations. Mountain-Plains has improved on this approach by creating custom-made, conflict loaded situations based on students' current real-life problems. This approach not only guarantees relevance, but greatly enhances student interest and involvement.

Career awareness and career exploration are educational innovations that have gained increasing popularity during the past decade. Many career guidance programs offer exposure to career options. Mountain-Plains goes one step further, requiring the student to integrate knowledge of him- or herself and the world of work and make a definite career choice.

Theoretical Literature

Theory

Mountain-Plains' experience offers a number of implications important to the provision of counseling services, especially for disadvantaged clients.

The counseling program employs an eclectic approach. While the professional literature contains evidence to support use of a developmental rather than clinical approach to teaching, guidance, and counseling, there is no evidence that any one specific counseling technique or theory will ensure success for all students. Thus, the counselor and student must be joint participants in deciding upon the treatment approach most likely to meet the student's needs or reduce identified problems.

Basically, the Mountain-Plains counseling staff have found that most students need theme-centered group counseling to stimulate social contact, build self-concept and increase receptivity to further counseling. For some special concerns, such as alcoholism, combinations of gestalt, transactional analysis, and rational emotive procedures have been effective. Marital problems have, in general, been best treated on one-to-one

In general, Counseling has assumed that the profession has been so conscious of man's fragility that it overlooks his robustness. Counselors have become trapped by their own feelings of superiority and thus fall for all types of "I can't" manipulations by clients. Early in the program's history, counselors were on 24-hour call. This system exhausted counselors, and kept students dependent, incapable of using their own resources to cope with problems. Counselors now expect students (clients) to develop psychological muscles--to take responsibility for their own lives.

Personal-marital-drinking-child abuse problems are inevitably complex. And relatively little has appeared in the counseling literature about multiproblem families from backgrounds like those of Mountain-Plains students. Nor has the relationship between occupational adjustment and mental health been adequately covered. Only recently has the professional literature begun to acknowledge that in most instances employability problems relate primarily to deficits in self-concept and interpersonal skills. This is not to diminish the importance of technical skills, but it is important to recognize that personal problems frequently limit the acquisition and use of technical skills, and must receive high priority in serving a population like that of Mountain-Plains. Further, the need for occupational or career adjustment, stability, and progress are more closely related to self-identity and self-worth than much of the counseling literature has acknowledged. Drinking, marital problems, child abuse, and self-destructive behavior are frequently symptoms of a lack of proper integration into the world of work.

In summary, current counseling theories afford little insight in dealing with economically, socially, and occupationally disadvantaged families. In addition, most existing theory does not advocate an eclectic approach, even though no one counseling theory will serve all situations. Finally, many counseling theories speak to symptoms rather than causes, failing to acknowledge the importance of occupational identity to other dimensions of mental health.

Counseling Practice. The geographical isolation of Mountain-Plains has made the acquisition and maintenance of a highly qualified staff difficult. Most of the counselors on site have relatively little formal training, and only a few have doctorates. In addition, no adequate outside mental health or psychiatric services are readily available. The mental health clinic in Glasgow offers no greater expertise than is available among Mountain-Plains staff. In situations where more resources were available, the professional literature would militate against master's or bachelor's level counselors even confronting the problems they resolve with considerable success at Mountain-Plains.

Several variables should be considered here. One is the counselor/client ratio. It would be impossible to attack the diverse student problems at Mountain-Plains with a ratio of one counselor to 200 clients. The current ratio at Mountain-Plains is one counselor to 30 families or, approximately, one counselor to 60 persons. This ratio is somewhat modified by the team approach in which Career Guidance specialists also work with students. Second, research at Mountain-Plains has shown that specific techniques are less important in influencing client's behavior than counselor's personal effectiveness.

Counseling Research. There are many possible research topics to which the Mountain-Plains Counseling program could give impetus. Major categories would seem to include--

1. The usefulness of specific forms of therapy with this particular population. Techniques warranting additional research would include transactional analysis, gestalt therapy, and biofeedback. Research designs measuring the effectiveness of these

in individual and group counseling should be developed and tested in relation to specific problems--e.g., alcoholism, child abuse, marital discord.

2. Specific problems encountered by the minority and disadvantaged populations served at Mountain-Plains. Minorities, particularly Indians, have had difficulty successfully negotiating the program. Identification of the personal and demographic valiables that determine success or nonsuccess would be important to Mountain-Plains and to the many other programs serving minority or disadvantaged clients.

3. The social, cultural, and demographic effects of the Mountain-Plains location. In many ways, both students and staff are victims of geographical isolation. This variable creates its own therapeutic environment, complete with formal and informal reinforcements and interactions between staff and students beyond what would probably otherwise occur. How such a therapeutic milieu subtracts from, complements, or adds to the effects of the Counseling program is not known, but it could be significant in terms of total program outcomes.

Career Guidance

Career Guidance Theory. In general, career guidance rests on vocational/career development theories derived through work with relatively advantaged, middle-class white males. Such theories often assume a developmental continuity which does not fit the experience of disadvantaged, minority, or female populations. There is as yet no comprehensive perspective on the career development of women, nor is there much systematic information pertinent to disadvantaged groups classified racially, ethnically, or geographically. Relatively little attention has been given to the career development of the rural poor as compared with the urban poor. Thus, considerable adaptation from theory to practice is required if such theories are to serve the Mountain-Plains population.

In addition, most vocational/career development theories have been validated with samples of students of either secondary or college age. In most instances, these students have been either in an initial exploratory period, or in a period of indecision following a series of unsuccessful trial experiences. Thus, most available theoretical perspectives do not incorporate the levels of frustration, hostility toward employment conditions or employers, or inaccurate self-concept which characterize many Mountain-Plains students.

Finally, vocational/career development theories in general do not specifically address the relationship between educational deficits and arrested vocational development. The school dropout experiences a variety of employment barriers in a society where credentials are a key factor in occupational placement, and in all likelihood has never had an opportunity to clarify his or her vocational needs, personal strengths, or the variety of ways in which these might be gratified through work.

Career Guidance Practice. The Mountain-Plains experience reinforces the idea that a unified career guidance program requires careful planning and the knowledge of career guidance specialists. In particular, the following strategies seem appropriate.

1. Prior to establishing a program, the practitioner must become knowledgable about the theories, research, and career guidance systems available to him. He or she must also be aware of the needs of the student population to be served. Only then can objectives and evaluation criteria be developed.

2. Once tentative objectives have been identified, the practitioner should seek the support of counselors, instructional staff and administration. During this time, he or she should explain program goals and objectives; relate the purpose of the program to expressed student needs; explain the operational cost and highlight tasks which can and cannot be accomplished; and solicit suggestions and recommendations. Such meetings can help make staff aware of the need for a career guidance program and secure their commitment to such an approach.

3. Once staff commitment is assured, resources must be identified. Resources include professional staff qualified to fulfill program objectives, guidance materials, and physical space adequate for housing a career information center and staff offices.

4. After the program has been approved and implemented, periodic orientation meetings should be conducted with the staff to explain the effectiveness of the program and to discuss programmatic changes and revisions.

The following concerns are relative to program content:

1. The major emphasis at Mountain-Plains has been the implementation of a developmental process for vocational decision making. With such an approach, the practitioner need no longer rely exclusively upon test data to guide students' vocational decisions.

The developmental approach calls upon the practitioner to recognize the many small decisions the student must make before selecting a career. The practitioner should become aware of the vocational decision making process itself, and must be capable of providing students the specific information they need for personal career decision making.

2. Career selection demands updated, accurate information. Although numerous publishers are presently meeting this need, many practitioners may find the cost of their materials prohibitive. If budgetary constraints are of concern, national industrial and business organizations can often provide current career information at little or no cost.

3. In general, a student should be assigned to one career guidance staff member throughout the time that student spends in the program. This consistency allows the staff member to serve the student in both a guidance and advisory capacity, and to provide assistance with those vocational developmental tasks desired for vocational maturity.

4. At present, very few counselor education programs provide training specifically related to career development. Therefore, the program leader must coordinate seminars to assist career guidance staff in developing or enhancing needed competencies. Suggested topics may include theories of vocational development; use and misuse of tests; group and individual guidance techniques; use of career information; the process of vocational decision making; and ways of translating current research into practice.

Career Guidance Research. The Mountain-Plains experience has shown that R & D efforts across the country have not described career guidance approaches sufficiently that replicators can appreciate their potential impact. Aside from accumulating documentation about the efficacy of behavioral approaches to information-seeking and other exploratory behaviors, little can be said about the likely effects of different career guidance techniques on specific student problems. Although new career guidance programs are being developed, their effectiveness in producing desired student outcomes is still unknown. Equally important is a lack of data about the long-term effects of different career guidance interventions. Most available data are based on an assessment of immediate outcomes.

Most career development theory has evolved from descriptive rather than experimental modes, with samples restricted in size and composition. As a result, few career development hypotheses are unequivical. Rather, findings are interpreted in various ways, without the benefit of validation or replication across samples with divergent characteristics.

Relatively little is known about the effects of economic or cultural change upon career behavior. Most career development theorists have addressed the importance of situation variables only in abstract theoretical terms; few have researched the effects of such variables upon personal decision making. Thorough analysis of career development among different groups requires identification of variables related to occupational placement among persons who have never had an opportunity to clarify vocational needs or personal strengths.

Issues

Forced Choice

It is often debated whether a forced occupational choice can cause a student to make hasty or impulsive decisions resulting in an inappropriate career selection. Mountain-Plains recognizes this possibility. Therefore, although the primary objective of Career Guidance is occupational selection, students are allowed a 30-day period of grace in which to reconsider a decision before entering an occupational curriculum. Student interest and progress are monitored very closely at this point so that any changes or new decisions are guided by an awareness of personal capabilities and goals.

Centralized Planning

One may take issue with a centralized student program planning procedure in which the registrar, counselors and career guidance personnel negotiate the students' educational plan. Some persons feel that this approach places too much responsibility on too few people. The Mountain-Plains experience indicates that centralized student program planning and centralized student program monitoring are more efficient overall than a decentralized system in which a student would negotiate an educational plan with his or her instructors and advisor.

Techniques

Some persons take issue with the use of confrontation, reality testing, and behavioral modification as teaching-learning techniques. Mountain-Plains believes these techniques are compatible with its two central goals for students--employability and life satisfaction.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The preceding chapter examines the theory, organization, and practice of Counseling and Career Guidance at Mountain-Plains. Particular emphasis is placed on the ways in which the developmental problems of economically disadvantaged and/or minority families influence Counseling and Career Guidance procedures and objectives. Implications for counseling and career guidance research are identified.

Based on the Mountain-Plains experience, one may conclude that no one theory of counseling offers the answer. It may be a useful exercise to admit one's own inadequacies in meeting each client's individual needs--and to recognize the influence of one's own personality in a counseling encounter. At Mountain-Plains every modern theory has been used in some way with some person--sometimes successfully, sometimes not. Mountain-Plains counseling staff are reluctant to prescribe counseling techniques for hypothetical situations because there are too many variables. Even the main variables--counselor, client, problem/need, setting, theory/technique--offer infinite potential for variety. Mountain-Plains staff feel, therefore, that the key to success for any theraputic counseling program is a combination of skill and flexibility in testing and applying a wide range of techniques.

The Mountain-Plains Career Guidance component is based upon a developmental model for vocational decision making that focuses on content and process. Content refers to information about various occupations, while process refers to the various internal changes the individual makes as a result of guidance. Mountain-Plains staff recommend facilitating the career guidance process through both group and individual guidance techniques. Group guidance is useful in providing information; individual guidance is necessary if students are to be helped in applying this information to their own situations.

CHAPTER V

OCCUPATIONAL PREPARATION

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INTRODUCTION

Occupational Preparation is one component within the Educational Services Division, which also comprises the following components:

1. Family Core. A mandatory program for both head of household and spouse, designed to enhance skills in home management, budgeting, consumer responsibility, parent-child relations and basic health and nutrition.

2. Foundation Education. A program designed to help all students enrolled in an occupational curriculum develop the basic math and communication skills they will need on the job.

3. Early Childhood Education. A combination child care and early childhood development program serving children up to six years of age.

Goal

Mountain-Plains' Occupational Preparation program stresses mastery of identified competencies essential for entry level positions in selected careers. Currently available career clusters include: Building Trades and Services; Mobility and Transportation; Tourism and Marketing; and Office Education. There are approximately 40 individual careers within these clusters for which occupational preparation is available.[57]

The Occupational Preparation program serves approximately 200 families in residence at any one time. Services and programs are quite comprehensive in scope, and are directed at the total family.

Mountain-Plains is structured to provide a complete environment for selected families. In this respect, the program differs from the traditional occupational vocational-technical program.

Operating under the assumption that many vocational training programs fail because they do not serve the entire family, Mountain-Plains personnel developed a plan to reeducate and reorient all family members. The underlying premise was that unless the efforts of the head of the household to break free of the poverty cycle were supported by the family, any noted progress would likely be short-lived.

In restructuring the family's entire physical environment, Mountain-Plains first transports the family from their original home to the program site at Glasgow. The family's new environment includes educational and recreational facilities, and social and other supportive services.

The program is primarily concerned with development of employability among working members of the family (head of household or spouse). Individual development among all family members is a complementary goal. In fulfilling these goals, students have a chance to explore new life styles involving higher family aspirations, development of appropriate occupational attitudes or practices, and greater awareness of society and culture.

Purpose of the Chapter

This chapter discusses the significance of Mountain-Plains' Occupational Preparation program for research and development. The discussion touches on the broader meaning and significance of the subject, and boundaries for analyzing occupational preparation. The Mountain-Plains experience is discussed in terms of objectives, organization and functions, and efforts and results. Lessons learned from Mountain-Plains experience are presented as they relate to tradition, innovative developments, theoretical literature, issues and policy questions.

Relationship of Occupational Preparation Programs to The Monograph

Mountain-Plains recognizes that successful progress in a chosen occupational field often depends heavily upon proficiency in basic math and communication skills. The amount of time a student spends in Foundation Education--even after entry into Occupational Preparation--depends on his or her current level of proficiency (as measured by standardized tests), and on the level of proficiency demanded by his or her selected occupational field. For example, Carpentry requires high proficiency in math; a Clerk Steno course demands great proficiency in communication skills.

Foundation Education also provides programs for the General Education Development (GED) testing program, which leads to the equivalent of a high school diploma.

Occupational Preparation interacts closely with the Student Services Division. Such interaction supports the premise that the most effective manner of meeting the needs of a disadvantaged, multiple-problem family is by directing services to all family members. Student Services comprises three program components: Counseling, Career Guidance and Community Development and Recreation. Counseling supports the Occupational Preparation program by helping students develop the self-concept and self-awareness needed to function efficiently in the world of work. Career Guidance provides support by helping students select an appropriate career and outline an occupational preparation plan. And Community Development and Recreation helps students develop the social skills and attitudes that will permit them to enjoy community life--part of the new lifestyle which frequently accompanies increased employability.

Occupational Preparation enhances the total Mountain-Plains effort by assisting in--

- The design and development of the model.
- Research and evaluation of the effects of the model.
- The production and use of curriculum guides, learning activity packages, and reports.
- Cooperative efforts with outside agencies to provide career education to a disadvantaged population within the six-state region.[58]

Significance of Occupational Preparation for Research and Development

The Mountain-Plains family-based residential model has significant implications for research and development because it raises concerns common among other occupational preparation programs. Recognition of the importance of total human resource development vis a vis the family unit makes the Mountain-Plains concept one of the most exciting models to be tried in recent years. The results of this effort--both the successes and failures--can serve as a guide to potential replicators.

The project has afforded the National Institute of Education (NIE) practical experience useful in monitoring and improving future efforts, and has kindled interest in occupational preparation throughout the nation. The expertise developed among participants can lead to increased sensitivity concerning technical, methodological, and human deficiencies in current educational practices relating to occupational preparation and career guidance.

A review of voluminous documentation and contract proposals discloses a need to better define the relationships among occupational objectives, means of achieving them, related costs and required criteria. Greater efficiency is needed in translating innovative educational concepts into occupational preparation objectives. Relating educational objectives to occupational requirements may be an important first step. Certainly, variances would be expected between what is required for entry-level positions and the experience and skills demanded of a master craftsman. Curriculum must be flexible enough to provide for these differences. Equally challenging is the question of how much relative emphasis to place upon development of positive attitudes toward employment, and attainment of technical skills.

The issue is complicated by the need to determine not only what is but what ought to be or even what will be. Mountain-Plains focuses essentially upon the present, with perhaps one eye toward the future. But improved forecasting methods are required if occupational preparation programs are to keep pace with a constantly changing technological world. Traditional approaches need to be examined and used as a basis for improving--and perhaps standardizing--occupational preparation approaches. Standardization is valuable in the sense that it permits cost-effective comparisons, leading to identification of the most efficient occupational preparation approaches.

A closely related need calls for the predicting of shifting employment patterns and their impact upon labor mobility. It may be that occupational preparation programs will need to devote greater attention to fulfilling this need.

Identification of essential educational content and methodology, and elimination of what is unessential, can result in enormous savings of educational and financial resources. However, much remains to be learned about optimum ratios and coordination of occupational preparation programs with business and industry.

Society has historically demanded greater entry-level proficiency than is actually required for successful on-the-job performance. For example, possession of a high school diploma is typically used as a screening device, regardless of the nature of the position or the level of proficiency demanded. Presently there appears to be a tendency to follow the same pattern with regard to a college degree. Mountain-Plains has conducted a comprehensive, detailed skill and job analysis in an effort to relate program objectives to skills needed on the job. Perhaps that project could be refined or expanded and used as a basis for defining needed entry-level skills.

The importance of having an administrative structure and supportive units capable of translating exciting educational concepts into actuality is another lesson learned from the family-based residential model. The present project raises a question which should be explored more thoroughly: What is the necessity for planned intervention on the part of the grantor? Such intervention should not be arbitrary, but the result of a planned strategy to use counseling, objective observation, stimulation and thought-provoking discussion in instigating improvements or redirection at critical stages.[59]

CONCEPTUAL BOUNDARIES

The Broader Meaning and Significance of the Subject

A most singular characteristic of the Mountain-Plains Education and Economic Development program is its emphasis upon the family unit. The underlying theory is that the head of household cannot carry on a new lifestyle alone. He or she is still part of a family, every member of which must experience personal development in order to provide needed support to the head of household and to one another. If only one family member is allowed to progress, conflict can result. He or she may then be faced with the unwelcome choice of regressing to the previous lifestyle, or seeking a new environment in which to find fulfillment.

Family-directed programs help family members to grow in self-concept, ability to meet personal or family needs, constructive use of leisure time, improved health care, and increased family self-sufficiency. Recreational opportunities provide an ideal setting in which to enhance interpersonal skills and strengthen self-confidence.

An Early Childhood Education program provides services for children in three age groups:

- Infants, 6 weeks to 18 months
- Nursery, 18 months to 3 years
- Kindergarten, 3 to 6 years.

The program has two goals: To provide a developmental program for preschool children, and to instruct parents in improved child rearing techniques and concepts. Most younsters attend a half-day program. However, full-day care is provided for those from single-parent homes.

Spouses may, at their own option, enroll in Occupational Education. The practice is encouraged since the increased employability of spouses enhances the family's overall chances for success.

Mountain-Plains seeks to create a stimulating environment wherein adults can use their available strengths and resources to realistically cope with their problems. Through group and individual laboratory sessions using multimedia equipment, family members are provided assistance in developing positive attitudes and behaviors. Mountain-Plains staff seek to help family members adjust to a new way of living by gaining increased personal satisfaction through a new perception of themselves as independent, contributing members of society.

Analagous to the total-family services theory is the belief that participants' employment opportunities are enhanced if they have an opportunity to learn skills useful in a number of occupations. In practice this offers students increased chance for immediate employment following exit. If opportunities are limited in the student's chosen field, he or she can usually apply for a job in a closely related field, gain some on-the-job experience, and re-enter the chosen field at a later date--often at a higher rate of pay than could initially have been commanded. The residential-model theory upon which Mountain-Plains is based evolved from growing recognition that previously funded models--which provide isolated and oftentimes uncorrelated services to the disadvantaged--have been inadequate. Many earlier programs may have failed because while the head of household was advancing in technical and interpersonal skills, other members of the family were sometimes left behind. Given little chance to understand the changes in attitude and values that the head of household generally experienced, they often allowed resentment and apprehension to inhibit the potential upward job mobility that the family should have enjoyed. From this recognition evolved the concept of providing a comprehensive occupational training program to rehabilitate the total family.[60]

Boundaries for Analyzing the Subject

Specific selection criteria have been established for determining student eligibility to enter Mountain-Plains. Perhaps the most important criterion is evidence of need for the type of educational rehabilitation and occupational training Mountain-Plains offers. Need is determined to some extent by the family's total annual income for the year preceding application. In addition, the employment prospects of the wage earner(s) are evaluated. Employment status at the time of application is also considered. Potential enrollees are characteristically unemployed or underemployed; many are subsisting on marginal wages.

Additional criteria include evidence that family members are related by blood or marriage, and that the family has established residence within the region. Willingness to relocate is an important consideration because families who are accepted into the program must move to the Mountain-Plains site at Glasgow. An expressed desire to improve vocational proficiency and upgrade their general standard of living is a major factor in determining acceptance.

These selection criteria were established to help identify rural disadvantaged families whose diverse needs could best be met through a program like Mountain-Plains. The screening process also helps ensure selection of enrollees who demonstrate potential success. Mountain-Plains does not have sufficient resources to serve all families within its six-state region; it focuses therefore on those which seem likely to benefit most from its services.

The diversity of the target population definitely affects the instructional approach used in Occupational Preparation. Only through individualized instruction can the program realistically cope with the extensive variations among students' job aptitudes, vocational interests, attitudes, personalities, and--most important--basic educational achievements. Through an individualized self-paced approach, Occupational Preparation tries to coordinate students' expectations and potential.

Once the head of household specifies his or her career objectives, an overall educational plan is prepared. A course schedule systemizes this occupational preparation plan; this schedule is regularly adjusted to meet ever-changing individual needs--i.e., it becomes a type of continuous progress plan. The open entry/open exit format, in which students proceed at their own rates, quite successfully accommodates wide variations in students' abilities and characteristics. Diversity within the target population has not only, to a large extent, determined the instructional mode, but also mandated a complex recordkeeping system necessary to monitor individual student progress.

This coordinated recordkeeping system is capable of handling pretest, posttest, and cumulative progress data, and not only permits continual monitoring of student progress, but also aids in identifying potential problems.

Accumulated data are summarized on individual student profiles--another example of how student diversity affects the system. Student profiles contain information on pre- and post-program levels of knowledge, particular deficiencies requiring remediation, time spent in mastering skills or overcoming deficiencies, the level of proficiency attained, and a summary of knowledge acquired through the program.

Information gathered in records and student profiles is used in constructing master and individual schedules. These data also provide a basis for cost analysis.[61]

THE MOUNTAIN-PLAINS EXPERIENCE

Objectives

Each occupational area offered at Mountain-Plains is derived from a job market analysis within the six-state service area. Through this procedure, Mountain-Plains avoids educating students for careers where employment is unavailable. Further, each career field is subjected to comprehensive task analysis to ensure that objectives and required attainment levels are career-specific and relevant. Career preparation is based on mastery of performance objectives that Mountain-Plains identifies as important for entry into and progression through a chosen career. In place of standard textbooks, students work with materials either adapted or newly developed to facilitate attainment of identified objectives. Affective development focuses on development of personal attributes which are known correlates of effective personal, family and career functioning.

Developmental education is the key to Mountain-Plains. Staff assist students in discovering and developing their most positive assets. Deficiencies become subjects for negotiated change through behavioral contracts. This developmental approach minimizes the categorization of students as good (A) or bad (F) students--a categorization which has no meaning in out-of-school contexts. Mountain-Plains deals with individual strengths and weaknesses by making students and educators partners in the learning process.[62]

Organization and Functions

Since Occupational Preparation is individualized and open entry/open exit in format, families enter and exit weekly. Each student is likely to be at a different point in instructional curriculum. The point at which a student enters an Occupational Preparation program is determined through tests administered during orientation. Some students must spend time in Foundation Education either prior to or during Occupational Preparation. Others may not only be ready to enter an occupational program, but may have sufficient knowledge and skills to validate several LAPs, and thus begin at some midpoint of the curriculum. Since validation is always determined through performance tests, students are encouraged to challenge any portion of the curriculum they feel they have already mastered.

In addition, entering participants already have definite occupational goals. They are provided with up-to-date information regarding qualifications, career openings, and specific entry-level requirements. Those who do not have specific occupational goals in mind are given whatever information they need to make an appropriate career selection.

Prior to entering Occupational Preparation, all students--both heads of households and spouses--are required to validate Family Core. Generally, most adults require about four weeks to complete this part of the program.

The Occupational Preparation program for each student follows the student plan prepared during orientation. Student progress is formally reviewed every six weeks with less formal monitoring on a more frequent basis. Course completion is determined by posttest validation of student terminal performance objectives (STPOs).

Efforts and Results

The Curriculum Structure of Occupational Preparation

Occupational Preparation curriculum is designed to be congruent with the open entry/open exit, individualized format of Mountain-Plains.

As noted earlier, the smallest unit of instruction--not only in Occupational Preparation, but in all program components--is the learning activity package, or LAP. One LAP is prepared for every objective within a program. Student terminal performance objectives (STPOs), the final measure of proficiency in a given curriculum, may require completion of more than one LAP. STPOs are more comprehensive in scope than the formative objectives which together compose a unit of study; STPOs are used to describe the behavioral or performance expected of a student upon completion of that unit of study. LAPS specify instructional procedures, performance criteria, suggested measurements, and a resource list of appropriate written and audiovisual materials that supplement information presented in the LAP. LAPs are standardized and designed to be understandable to the student. Just as course objectives follow a sequential pattern, each building on the one preceding, so do LAPs. LAPs are designed to build student initiative and confidence because usually only a minimum of formal instruction or outside assistance is required. Students proceed from one LAP to the next as they feel ready, gradually building a hierarchy of skills. Instructors act primarily as resource persons, providing assistance as requested, guiding students' progress, and validating competency through administration of performance tests. In some instances, students are able to validate their own performance, thus making the system even more individualized. Results are fed into a computer and become part of each student's permanent record.

This individualized system offers particular advantages to the student. Immediate feedback is one. A student is constantly aware of his or her progress, and by evaluating and discussing test results with an instructor, can pinpoint specific areas of strength or weakness.

In addition, through the use of LAPs, complex occupational skills are divided into subskills, the performance of which is easier to master and easier to evaluate. Such subdivision helps ensure that students are not overwhelmed and discouraged by an unmanageable volume of content. The underlying premise is that mastery of many subcomponents equals mastery of the complex skills those subcomponents represent.

LAPs are grouped by content into units, which lead progressively to increased competencies indicated by higher level student terminal performance objectives. Each unit contains learning experience guides, or LEGs, which summarize content for a particular unit.

A course is a group of units with similar content. As indicated, courses have LEGs, and course level tests are provided where necessary.

Several courses constitute a Curriculum/Instructional area. Each Curriculum is designated by an appropriate job title, and constitutes a complete career preparation program. Each Curriculum/Instructional area includes comprehensive tests for an entry-exit profile and a diagnostic program prescription.

Procedures for Validating Student Attainment of Objectives

Mountain-Plains project has established some general criteria for validating student attainment of occupational objectives. These include demonstrated capability--in the subjective view of the student's advisor, counselor and instructors--to get a job, to keep it, and to progress vocationally. Related criteria include capacity for effective interaction with employers and fellow employees, adjustment to the American economic and social systems, effective family management, and satisfaction with one's job and with life in general.

Though such criteria cannot be applied with total objectivity, instructors and other staff who interact with students on a daily basis attempt to assess their employability according to such behavioral characteristics as dependability, reliability, punctuality, cooperation and initiative. The rationale behind this subjective evaluation is Mountain-Plains' philosophy that employability involves more than technical skill; it involves personal and interpersonal development. This personal evaluation of employability complements the more objective evaluation involving the administration of performance tests to measure attainment of specific objectives. Results of both types of evaluation are made available to potential employers in an effort to provide them as complete a picture as possible of students' overall capabilities.

Validation of occupational objectives is facilitated by use of a computerized record keeping system which permits continual monitoring of student progress throughout Occupational Preparation. Student progress can be monitored in terms of time spent in a curriculum, and actual level of attainment. If a student's rate of progress is noticeably slower than would normally be expected, an investigation can be made to determine the cause. Should a weakness in the vocational curriculum be detected, the proper steps toward modification can be taken. If the investigation shows that a student's lack of reading or mathematical skills is inhibiting progress, that student can be scheduled into Foundation Education. The point is, regular monitoring of student progress provides a means through which problems can be quickly identified and corrected. The purposes of this system are to bring about optimum use of resources, to effectively prepare students for entry into their selected occupational areas, and to provide a basis for determining program cost-effectiveness.

Programmatic Concerns

Because many participants are enrolled simultaneously in Foundation Education and Career Guidance, problems of interface arise from time to time. There are occasional conflicts concerning allocation of resources, demands upon student time, and provisions for counseling. Further, as expanding services precipitated a corresponding increase in per pupil costs, it became necessary to develop accounting and cost-allocation procedures by which resources could be allocated to areas of greatest need, and to those likely to provide maximum return for instructional dollars invested.

An important concern during development of Occupational Preparation centered on selection of specific occupational programs to be offered. To aid their decision, staff conducted a survey of the six-state service region to determine present job openings and projected future requirements. Based on this job market survey, Mountain-Plains personnel, outside consultants with expertise in job market analysis, and members of Mountain-Plains' governing board together identified certain areas for occupational emphasis. Identified areas included building trades, social and educational services, office education, food and lodging, and mobility and transportation.

Two other occupational areas were considered but eventually rejected because of limited resources and the extensive time required to prepare persons for entry level positions in these fields. The two areas were allied health occupations and public service occupations.

Based on continual analysis of the regional job market, assessment of available resources and awareness of student interests, Mountain-Plains has regularly modified its curricular offerings. As indicated earlier, currently available career clusters include Building Trades & Services, Office Education, Mobility & Transportation, and Marketing & Tourism.

Once instructional areas were identified, it was necessary to decide upon an instructional approach. The Curriculum component of the Research Services Division was given the responsibility for this decision. In cooperation with the Occupational Preparation staff, Curriculum staff identified specific tasks within selected Occupational Preparation areas, and prepared objectives corresponding to each task. Based on objectives, LAPs were developed, then grouped into logically organized units and courses. Preparations were made to obtain required instructional materials, tools, and facilities. Learning activity stations were established.

As students began arriving, and Occupational Preparation became operational, it became necessary to gather data and to develop internal evaluation systems capable of providing feedback on that data as a basis for improving existing learning activities. Concerns arose regarding the objectivity and validity of baseline data, the efficiency of data collection instruments, and the adequacy of the research design. Research Services employed external consultants to help resolve these concerns.

Problems also arose with respect to recruitment and selection of enrollees. Initially, selection criteria were not always adhered to strictly, and a number of urban families were enrolled. In addition, despite attempted care in screening applicants, it is suspected that some families with anti-social behavior and persons currently using drugs were enrolled. Renewed emphasis on the need to select persons most capable of benefiting from Mountain-Plains services has helped resolve this problem.

The isolated location of the training center and the inadvertent enrollment of students not receptive to the kinds of training offered may have contributed to the high degree of noncompletion, and resultant high per student costs for completers that plagued Mountain-Plains' early efforts. Some problems leading to noncompletion have been identified as low self-concept, excessive use of alcohol, medical problems, financial problems, poor money management, lack of self-acceptance and corresponding high instances of absenteeism. By focusing on these identified problems, Mountain-Plains has increased the current completion rate to approximately 75 percent.

Yet certain problems remain. Instructional effectiveness must continue to be monitored and improved. Per student costs must be further reduced through emphasis on more rapid completion, better job placement, more adequate follow-through, and continued assessment of the present administrative and educational organization.

It is recognized that certain research and development costs are included in the overall budget. Continued care must be taken not to obfuscate financial allocations by charging questionable items to an R & D budget. Legitimate R & D costs and those which will not recur must continue to be identified.

Continual re-examination of the curriculum in light of student needs and fluctuating job market demands can help ensure that Mountain-Plains remains responsive to the regional population it serves.

Continued emphasis must be placed on reducing the student drop-out rate. More flexibility in terms of curricular offerings might contribute to reduced student attrition.

Of those who complete a Mountain-Plains occupational curriculum, 89 percent are employed within three weeks following program exit. The average income gain for the head of household at that time--as compared to pre-program levels--is $107 per month. But despite these favorable outcomes, it is important to focus continued attention on improving student placement and producing even greater differences in pre- and post-program income levels.

A concern which may deserve further study focuses on development of an evaluation design which provides objective criteria for evaluating program outcomes in light of Mountain-Plains' stated goals. The present design provides for collection of data regarding the cost of relief, unemployment, and underemployment of families prior to enrollment at Mountain-Plains. A comparison is then made to families' situations post-exit, when many students have completed Occupational Preparation and obtained employment. The comparison yields a positive cost-benefit ratio. It is recommended that future evaluation and cost-benefit analysis include consideration of the taxes paid by pre- and post-exit students.

Comparison with similar programs can be a useful means of gaining new insights or perspectives. Continued comparative analyses using cost-effectiveness data obtained from such programs as the Job Corps, from vocational-technical schools, or through review of training contracts, could provide a valuable basis for improving the family-based residential model. Such comparative analyses often have definitive implications for occupational theory and practice.[63]

LESSONS LEARNED FROM THE MOUNTAIN-PLAINS' EXPERIENCE

Tradition

Tradition often emphasizes education of the student in terms of his own individual apparent needs, without consideration of society's needs. It is Mountain-Plains' experience that the two--personal needs and societal needs--are so closely interrelated that neither can properly be considered in a vacuum. Employability is a desirable goal for the student because employment presumably leads to independence, increased income, and a more satisfactory lifestyle. But students' employability is an appropriate goal for society as well, since employed persons generally have greater potential to become contributing, productive members of society.

Innovative Developments

Innovations in work study programs have been emerging for the past 20 years. However, Mountain-Plains has improved "learning by doing" opportunities for students through a careful task analysis of specific jobs and the development of a curriculum that reflects knowledge of competencies needed on the job.

Theoretical Literature

The Mountain-Plains' experience corroborates the theory that development of community resources through interaction between school and community is desirable. Mountain-Plains staff interact regularly with management and labor organizations, local employers, and community agency personnel.

However, the work experience programs which Mountain-Plains once sponsored have been discontinued. It was Mountain-Plains' experience that given the isolation of Mountain-Plains from cities or towns where many jobs would be available, and the expenditures required in having students travel to and from a work experience site, the relative benefits did not justify the cost of the project. World of work "reality" is at least partially achieved, however, through the use of simulated work settings and multimedia presentations.

Issues

The breaking of complex tasks into their subcomponents to facilitate individualized instruction raises an important question: Does this approach assist or hinder students in gaining a grasp of the gestalt or whole? Without this larger picture in mind, students may lose sight of why they are performing each of the many small steps. The feeling that the curriculum is tedious, or that it leads nowhere, could produce great dissatisfaction, and result in a high rate of attrition. Students must be given assurance that the seemingly isolated lessons are in fact part of a unified whole. Mastery of every objective must be regarded as evidence of real progress toward the education of a craftsman with demonstrated ability in virtually every facet of his or her occupation.

It is also important that students understand the personal advantages to them in being able to progress as rapidly as their ability, knowledge and motivation will allow. Careful monitoring of student progress and the provision of assistance as soon as the need is indicated may help students see individual LAPs not as so many obstacles between them and program completion, but rather as steps leading to program completion--and ultimately employment.

Staff are currently developing instructional activities specifically designed to tie seemingly unrelated (from the student's perspective) learning activity packages into a coherent series of steps toward occupational proficiency.

Policy Questions

Is the public deriving any measurable benefit from research and development programs funded by federal sources? Mountain-Plains personnel felt that the program is beneficial to the public in terms of the increased earning power of completing students, and their decreased dependence on other federally funded assistance programs. Staff also cite the less measurable--though equally important--benefit in the increasing number of persons capable of managing their lives, coping with everyday problems, and interacting harmoniously with others.

What skills do the families enrolled in the Mountain-Plains program need? Family members need occupational skills sufficient to gain them positions in which they can earn at least enough to meet material needs. Additionally, they need to develop such characteristics as dependability, punctuality, and cooperation in order to enter, hold and advance in a job.

Who should teach them and to what level? Trained, experienced specialists in various occupational areas should provide training sufficient to ensure mastery of competencies needed for entry-level employment.

How does instruction relate to employment needs? Instruction is related to present job openings and projected future requirements through continual regional job market survey and analysis, selection of occupational areas for emphasis, task analysis, specification of objectives and preparation of learning activity packages.

Should spouses be eligible for Occupational Education? Enrollment in Occupational Preparation is optional for spouses at Mountain-Plains. Spouses are encouraged to enroll on the premise that their increased employability enhances the family's overall chances for success.

CONCLUSIONS, RECOMMENDATIONS AND SUMMARY

Conclusions

There are many pitfalls inherent in drawing conclusions based on a somewhat limited number of visits, contacts with Mountain-Plains staff, and a (necessarily limited) perusal of voluminous printed materials and reports. On the other hand, an outside observer can frequently offer insights with an objectivity not easily achieved by those less remote from the instructional site. With the foregoing caveat in mind, the following conclusions are offered.

A problem not unique to Mountain-Plains project is the difficulty in coordinating many diverse elements into a smoothly functioning operation. Onsite conversations suggest that smoother interface could occur through more effective interaction among the various program components. If the members of each component could understand more fully the roles of other components, and how each could effectively enhance the work of the other, increased program viability would result.

Clarification of component goals, along with the underlying theories and means by which these goals are to be achieved would be an important first step in outlining expectations and identifying any duplication of efforts. A modified application of a management by objectives analysis could prove the most effective manner of accomplishing this. Concomitantly, each component might consider the ways in which it could support and in turn be supported by other components. Such efforts could enhance communication and provide a basis for periodic planned feedback.

EDITOR'S NOTE

The concern stated in the preceding paragraph above has been ameliorated at least in part by publication of the Mountain-Plains Handbook: The Design and Operation of a Residential Family-Based Career Education Program. The handbook specifies goals, objectives, operational procedures and intercomponent functions for every component within Mountain-Plains. Copies of the handbook are available from the Mountain-Plains site at Glasgow.

Some general observations may provide further insight concerning program operations. It was anticipated from the outset that the partially deactivated Glasgow Air Force Base would offer an ideal site for testing a residential training program to help unemployed and underemployed families develop marketable job skills. In most research projects, a problem is identified, a hypothesis advanced, strategies put forth to test, and solutions proposed. Interviews with project personnel, however, indicate that this approach was not followed in all respects. Some persons felt that Mountain-Plains had been selected as a suitable alternative in an urgent search to find a way of using a surplus Air Force Base in an area of declining population, as a means of keeping the region's economy viable, and preventing further population exodus; and that perhaps more thought should have been given to analyzing the resources offered by the site and the region to ensure that they would support a program like Mountain-Plains.

At the same time, the Air Force Base and the physical location do offer resources that perhaps have not been fully explored. An opportunity exists to create more new educational models in a facility that is perhaps unique in its potential.

Recommendations

It is readily apparent that students within an Occupational Preparation program are allowed to change their goals within the first few weeks of training, and to enter a different program either at the same level or at a lower level. There is little evidence, however, that students are encouraged to enter a new program at a higher level. Staff should urge students to set goals commensurate with the fullest range of their potential. It may be that that potential is not fully recognized until the student is into an Occupational Preparation program and has had a chance to demonstrate his or her skill. Therefore, the option to move to a higher level should always remain open.

Materials developed by the Curriculum component seemed less in evidence than commercial materials and textbooks. This may be a reflection of the fact that instructors from traditional settings are often more inclined to use commercially published materials. Or perhaps new instructors do not always become familiar with the Mountain-Plains materials as quickly as desirable. Instructors and staff should be thoroughly oriented to the materials developed specifically for the target population and the rationale behind their use. If commercial texts and materials are to be regarded as supplementary rather than primary, that distinction should be made clear.

Summary

This nation appears committed to an "open society," wherein people who are properly motivated and who have the necessary skills can move upward to achieve the "good life" while making a real contribution to their community. Because the extant system does not always foster such upward mobility, special efforts are made to treat specific problems, and to keep that society open. Mountain-Plains' project is an example of one such special effort. Its success remains to be fully demonstrated.

Yet much that is worthwhile has occurred. For many families the occupational preparation program has meant a new start--a chance to break out of the poverty cycle and gain independence from relief payments, unemployment subsidies, Aid to Dependent Children, ESEA Title I funds, and other federally subsidized assistance. Given sound, imaginative leadership, continued reassessment of goals and procedures, a willingness to learn from past failures and successes, a serious commitment to improving cost-effectiveness, and continuous effort to redefine and sharpen the mission of Mountain-Plains, greater success can become a reality. To a large extent, that success will be judged by the degree to which Mountain-Plains can transform the consumers of society's resources into producers of those resources.

CHAPTER VI

RECRUITMENT, SELECTION, PLACEMENT, AND FOLLOWUP

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RECRUITMENT, SELECTION, PLACEMENT, AND FOLLOWUP

INTRODUCTION

Mountain-Plains' Field Services Division comprises two components: Placement, which is located onsite at Glasgow; and the State Office component, with field offices in the capital cities of each of the six states Mountain-Plains serves. Eighteen persons staff the six field offices. The goals of the Division are to recruit and screen applicants, to place completing students in jobs, to collect followup data for use in improving the program, and to maintain liaison with state and local agencies.

In recruiting students, field office staff consult a variety of sources, including state and private agencies, civic and church groups, Indian groups, former students, and lists of families who have applied for economic or social rehabilitation services in the past.

Placement procedures are initiated 30 days prior to a student family's projected completion date. At this time, a notification of the student's pending graduation is forwarded to the field office staff in the student's chosen state(s) of residence. Upon receipt of that notification, field office staff collect and organize all available student information, contact local employers and state employment agencies, and proceed to identify employment possibilities.

Student followup and liaison activities are conducted on a regular basis to provide support for recruitment and placement efforts.

Purpose of the Chapter

This chapter covers student recruitment and selection, job development, placement, and followup activities as conducted by State Office staff.

The Field Services Division plays a key role in fulfilling the Mountain-Plains mission. For participating families, formal contact with Mountain-Plains begins and ends with field office staff--first in their original state of residence, during recruitment, and later in their newly chosen state of residence, during placement.

Relationship of This Chapter to the Monograph

Although most of the monograph focuses on activities carried out at the Mountain-Plains center in Glasgow, this description of State Office operations and the processes of recruitment, selection, job development, placement and followup may be useful to practitioners, policy makers, students, and other interested readers. Some of the lessons learned from the Mountain-Plains experience may be applicable to other types of rural and urban programs serving the needs of similar target populations.

Significance of This Chapter for Research and Development

Followup studies conducted by Mountain-Plains have significance for research and development generally. The Mountain-Plains operational plan provides for regular research followup at six-month intervals for all exited families (successful completors and dropouts). The design calls for a non-attending control group equated by randomization, plus special indepth followup on representative samples of students. This design allows Mountain-Plains to answer with confidence questions regarding program effects.[64]

CONCEPTUAL BOUNDARIES

The Broader Meaning and Significance of the Subject

Although this chapter focuses on recruitment, selection, job development, placement and followup--the five functional responsibilities of the State Office component--several related topics must be considered. For example, proper recruitment in any human development program requires careful specification of the target population. For the Mountain-Plains program, only *residents* of Wyoming, South Dakota, North Dakota, Nebraska, Montana or Idaho are eligible to be recruited. Within this overall population the target group includes only *families* (related by blood or marriage, with a head of household 18 years of age or older), and among them only *multi-problem* families--e.g., those characterized by unemployment or underemployment, low educational levels, little knowledge of home management or interpersonal skills, poor employment history, and a host of attendant problems. Mountain-Plains is characterized as a *rural*, residential career education program; hence it would seem that urban families (however defined) are not eligible to be recruited.

As a career education and economic development program, Mountain-Plains is primarily concerned with problems relative to employability. The target population is limited to families whose incomes are below the poverty level limits established by the U.S. Department of Labor's

Employment and Training Administration (approximately $4,500 for a nonfarm family of four persons as of 1973).[65] Mountain-Plains can therefore be considered an anti-poverty program.

The following data on the size and composition of the target population regionally and nationally are provided by ABT Associates.[66]

At the time of the 1970 Census, there were some 51.2 million primary families in the United States. Of course, 20.3 million families lived in places defined as rural, and 10.1 million were defined as under 1.5 times the official poverty level. Some 5.3 million families were potentially eligible for participation in a Mountain-Plains type of career education program on the basis of both poverty status and rural place of residence. Applying to this potentially eligible client population the additional criteria of age, education, and physical ability of the family head to work produced the following results:

- 92 percent of family heads of households were physically able to work.
- 80 percent of family heads of households had sufficient education to negotiate the demands of a career education program.
- 50 percent of family heads of households were age-eligible (between the ages of 18 and 49).

Applying all three of these additional eligibility criteria simultaneously to the potentially eligible client population produced these results:

- 2.3 million families were eligible for family-based career education programs similar to Mountain-Plains.
- Approximately 11 million individuals were represented by the 2.3 million eligible families, and would be directly affected by participation in career education programs similar to Mountain-Plains.

As will be explained later in the discussion of selection, the application of numerous exclusive criteria significantly erodes the size of the potential target population.

The degree of consonance between State Office staff and onsite Placement staff is critical. It is important that they hold common attitudes and premises (implied or stated) about appropriate strategies for service delivery, and the ways in which their various responsibilities interrelate. Placement staff must depend on State Office staff to follow through with placement activities initiated onsite and to provide adequate student followup data for use in improving services. State Office staff, on the other hand, must count on Placement staff to provide accurate, timely data on student progress so that job interviews and other placement activities can be coordinated smoothly.

It is also vital that personnel in the various field offices share a common understanding of the goals of Mountain-Plains, and the nature of the target population the program is meant to serve. Otherwise, students with minimal capacity to benefit from Mountain-Plains may be recruited; their misconceptions can lead to disenchantment with the program and high attrition.

In State X, for example, potential enrollees may be told that only rural families without serious behavioral problems are admitted to the program; that such families go to Glasgow chiefly to acquire job skills; and that the training methods are known to be the most modern and effective available. After completion, they may be told, the head of household and his family ought to be ready for successful participation in the job market, without special consideration or help from employers, social service agencies or community groups.

Recruiters in State Y, where field staff are more oriented to social rehabilitation, may concentrate on families facing marital crises or problems involving use of alcohol, emphasizing the benefits of Mountain-Plains' Counseling and Career Guidance, and promising long-term continuation of supportive services.

Clearly, some consistency in recruitment approaches must be maintained if the program is to have credibility, and if it is to reach those whom it can most benefit.

BOUNDARIES FOR ANALYZING THE SUBJECT

Families of two or more members with at least one adult over 18 are eligible for program participation. Families are selected through the application of established criteria. Exclusive criteria disqualify nonreaders, persons possessing severe medical disabilities, and the college educated. Other institutions are better prepared to provide these populations the special services they need. Mountain-Plains focuses on those who may have been in touch with but whose needs cannot be fully met by traditional rehabilitation or maintenance programs, or those who, for personal or financial reasons, could not successfully negotiate public post-secondary institutions. Members of this population are typically educable but presently unskilled or underskilled. Most possess a poor self-concept and poor work habits, and have no access to currently available educational alternatives.[67]

THE MOUNTAIN-PLAINS EXPERIENCE

Objectives

The State Office component's primary objectives are to make the services of Mountain-Plains available to the largest practical number of persons, and to provide the training those persons need to become gainfully employed, useful, participating citizens.

The purpose of effective recruitment procedures is to ensure an adequate pool of eligible families to meet state and center quotas and to permit the application of valid, random selection procedures in accordance with Mountain-Plains' research design. Recruitment is considered successful when these conditions are met without so large a backlog of applicants awaiting relocation that families lose interest and drop out before being allowed to explore their potential through participation in the program.

The Placement component provides placement assistance to all completing students. The component's main objective is to ensure receptivity among employers throughout the region so as to provide maximum employment opportunities for exiting students. The receptivity of employers to Mountain-Plains graduates is one measure of job development success. The number of jobs readily available is another measure of success.

Placement activities include arranging job interviews for all completing heads of households. Every attempt is made to place the individual in his or her occupational area and to ensure the utmost in career opportunity by identifying jobs with opportunity for personal growth and professional advancement.

Followup support ensures that each request for assistance from a family or employer, during the first six months post-exit, will receive either direct action by the State Office staff or the attention of an appropriate local agency. Requests received after that period are assigned a lower priority, but sill responded to as resources permit.[68]

Organization and Functions

In addition to their regular responsibilities, state staff maintain contact--via telephone, letters, and periodic site visits--with families recruited from their states throughout the nine months or so those families spend in the program. Field office staff help families adjust to the Mountain-Plains environment, and keep a close watch on their progress. Later, staff offer assistance with housing and other aspects of relocation from Glasgow to the family's new place of residence.

State Office Personnel

Each of the six State Offices has a three-person staff consisting of a state coordinator, a field operations specialist, and an office manager. Although the coordinator and field operations specialists share responsibility for component functions, there is often a practical division of labor between recruitment and selection on the one hand and job development, placement and followup on the other. These two staff members travel extensively throughout the state, while the office manager generally maintains a normal 40-hour week in the office, where he or she is available to respond to inquiries and make necessary arrangements for services.

State Office personnel generally have experience in business or in such human services programs as Employment Security, Community Action, or Probation Services. Some have worked as teachers, ministers, or career officers in the Armed Forces. Most coordinators hold a baccalaureate degree, and have at least 10 years of work experience. Some have been active in state government and are selected for employment at Mountain-Plains by the governors of their respective states. Field specialists are typically college students with somewhat less professional experience than the coordinators. Office managers are usually high school graduates with varying amounts of work experience. The annual cost of operations for each field office is about $90,000, of which $21,000 is budgeted for travel and telephone services.[69]

Recruitment

Quotas call for each state to maintain "an onsite family population of 31 to 35" in order to assure "190 student families onsite."[70] The optimal onsite population has varied over time, having been set as high as 210 families. Failure to meet student quotas has sometimes created severe pressure on state staff, strained relations between the center and State Offices, and sent coordinators and field specialists scurrying across their states on intensive recruiting missions. There are various reasons for failure to meet quotas.

In some instances the cause is traceable to activities at the center: e.g., moratoria on entry (resulting in delays and eventual withdrawal of families that had at one time been ready to enroll); families completing programs earlier than planned; delays in final selection. In other cases, busy seasons interfere with the recruitment and screening process. State Offices have sometimes nominated families they felt should be admitted to the program, but the center rejected them as unsuitable. Such conflicts can disrupt the intake process and create friction throughout the entire program.

Families are recruited in a variety of ways. Sometimes heads of households or their spouses walk in or telephone the State Office requesting information and interviews. Radio, TV and newspaper want-ads reach a number of people; staff presentations before various audiences draw others. Word of mouth--especially from friends who are previous program participants--is especially effective. However, the majority of applicants are referred to Mountain-Plains by such state and local agencies as welfare, employment security, vocational rehabilitation departments, community action groups, Indian tribal organizations, manpower programs, schools, churches, and employers. Establishing good relationships with prospective referral agencies is a major strategy for successful recruitment.

Though the Mountain-Plains target population is defined as rural, referrals and direct applications are encouraged from families residing in metropolitan areas within the region.

Selection

The process of recruitment overlaps with selection in that only those families considered to be potentially eligible are encouraged to submit application forms and other related documents. Screening of applicant families by the State Office staff is a continuing process. The State Offices' primary objective is to make Mountain-Plains services available to the largest practical number of rural disadvantaged families. Since the concepts of rural and disadvantaged have never been operationally defined by Mountain-Plains, emphasis has been placed on recruiting families that can meet specified standards with regard to mental ability (minimum score of 5.0 on the Wide Range Achievement Test [WRAT] reading test), perceived attitudes and motivation, behavior patterns, debt status, family size, physical and emotional health and capacity, and alcohol or drug addition.

A 30-page document submitted by Mountain-Plains to NIE (An Evaluation and Comparison of the Selection Criteria as Used in the Recruitment and Selection Process of MPEEDEP, January 31, 1973) contains very specific and detailed information on selection criteria and guidelines.

In a subsequent document (Career Education Model IV: Selection Criteria, revised September 4, 1973) families were declared ineligible if any members had alcohol problems severe enough to influence work, marriage, or social functioning or if adult members of the family had exhibited violent behavior in the past year, such as physical abuse toward anyone. A basic consideration in selection, along with the needs of target families, is the perceived ability of Mountain-Plains to meet those needs given its available resources. As of April 1975, however, Mountain-Plains still had not produced a definition of the target population or estimates of its size or composition.

EDITOR'S NOTE

Data on the size and composition of the target population have since been provided by ABT Associates.

If an applicant meets general guidelines concerning such factors as personal indebtedness, family size, and physical capability, additional information (e.g., health history) is obtained by mail, telephone and a personal interview involving a home showing of Mountain-Plains' slide presentation on life at the Glasgow center. Community agencies are asked to provide information and impressions about the applicant family.

Family interviews and some agency checks, of course, must be conducted in the applicant's community, which may be located hundreds of miles from the State Office. This work entails substantial costs in time and travel expense and calls for careful planning. Whenever possible, such functions as job development, placement, and followup are handled on one trip.

After careful screening by State Office staff, the entire family file is forwarded to Glasgow for a final decision on selection. Families are notified of acceptance by State Office staff, who also make arrangements for the family's trip to Glasgow. Families are provided with transportation expenses and per diem allowances in advance. Upon arrival at Glasgow, each family is assigned housing at a $40 monthly rental, and begins receiving a weekly subsistence payment of $85 (rates as of April 1975).

According to data published by Mountain-Plains early in 1975,[71] a total of 813 student families were received at Glasgow during the three-year period from March 1972 through February 1975. Following is a brief summary of the salient characteristics of families actually selected for entry:

- About 81.3 percent of household heads were married, 12.3 percent divorced, 2.3 percent separated, 3.4 percent single, 0.6 percent widowed (i.e., nearly one-fifth were single-parent families).
- The average age of the head of household was 26.6 years (spouse, 23.2 years; children, 5.3 years); less than 3 percent of household heads were over 44 years of age.
- The average family size was 3.82 persons, and the average number of children per household was 1.99.
- 15.3 percent of the student families were American Indian, 4.8 percent Latin American, and .06 percent were Black.
- The average educational level of household heads was 11.0 years of schooling completed (11.5 years for spouse); 46.4 percent of adults were high school graduates.
- Approximately 39.6 percent of the heads of household had been employed fulltime prior to program entry; 55.7 percent were unemployed; others worked part time or were not in the labor force.
- Family earnings in the year prior to program entry averaged $3,114; 39.2 percent of the families had received welfare assistance during the year; and 57.0 percent had received food stamps.
- Debt obligations over the next 12 months averaged $706 per family; only 20.2 percent of household heads carried life insurance; and 24.1 percent of families had medical insurance.
- Approximately 71.1 percent of families had been living in rental housing; another 19.4 percent lived with friends or relatives; and 8.3 percent owned their own homes (including mobile homes).
- About 50.3 percent of families had telephones; 93.8 percent had indoor flush toilets; in 6.3 percent of families, children over five years of age slept in their parents' bedroom.

- Representation of the six states in the service region was roughly equal among the 813 families enrolled at Glasgow from March 1972 through February 1975.

A comparison with current data presented on page 72 will show minor shifts in these percentages.

Job Development

As suggested earlier, job development can have at least two meanings: 1) identifying existing employment opportunities and anticipated job vacancies; or 2) working with employers to create job opportunities particularly suited to given individuals. Mountain-Plains' job development functions have generally been limited to the former--assuring available positions for exiting students. State staff establish rapport with employers and employment office staff, build a receptive attitude towards Mountain-Plains graduates, and create a smoothly functioning network of labor market information.

The State Offices' job development goals are to offer exiting students a choice among available openings and--apparently reflecting Mountain-Plains' definition of itself as an economic development as well as an educational program--to meet the needs of the labor market by providing qualified persons to fill jobs.

Top priority in job development is given to household heads of completing families, but careful consideration is also given to spouses. Job development services are provided to heads of households and spouses in noncompleting families (those who resign or are asked to withdraw prior to completion) on a time-available and largely discretionary basis.

Sufficient data are not available to analyze Mountain-Plains' progress in creating jobs to meet the special needs of exiting Mountain-Plains students. Apparently very little effort has been channeled this direction.

Job Placement and Community Location

If student selection is the first crucial point in the Mountain-Plains experience, job placement/community location is the second, signaling the family's new start in the world of work and community life. Placement is the beneficial result of that experience--for both the families and society in general.

Once families indicate their preference for a state--or states--of residence, and the appropriate State Offices are notified, each head of household and spouse desiring placement services prepares a personal data sheet. These sheets--along with student transcripts, counselor's employability report, evaluation of student performance in a mock interview, work experience evaluation form, financial status report, health report, and instructor's evaluation--are reviewed in an interview session with the Mountain-Plains Placement Officer five weeks prior to completion. At this time a firm completion date is set, and procedures by which the State Offices arrange for job interviews are explained. Four weeks before completion, this total Exit Information Package is forwarded to the states of possible relocation. Job interviews are arranged by State staff in coordination with center staff and the student, with trips scheduled immediately following completion whenever possible. If placement is not effective within 10 days after program completion, the family is exited without placement to the city and state of their choice. Families who are not successfully placed prior to leaving Glasgow, or heads of households forced to accept unsatisfactory employment on a temporary basis, may receive continuing assistance from the State Offices for up to six months following relocation.

Placement and location involve not only finding a job but also arranging satisfactory housing and settling into the community. State Office staff provide help with these arrangements too, sometime prior to the first day on the job. Families who have not arranged for housing prior to exit are encouraged to leave the center several days early. A member of the State Office staff meets the family and continues the housing search with them. Often, particularly in the case of single parents, actual physical assistance in the moving of household goods is required.

Followup Services and Reporting

In addition to the relocation assistance described above, State staff stand ready to provide help in dealing with crises, searching for better jobs, and generally offering post-placement support. Within four weeks after the family's departure from Glasgow, State Office staff prepare an initial relocation report based on personal or telephone interviews with the family or new employer. Like subsequent reports, this report is forwarded to the center for R & D purposes; copies are retained in the State Office case files.

Mountain-Plains followup contacts, whether made at the initiative of State staff or student families, serve a number of functions. For example, support services can be provided not only in housing and job improvement (for both the head of household and spouse), but also in such areas as household budgeting, consumer credit, medical care, continuing education, work relationships, legal aid, transportation, mental health and family counseling, family planning, child care, recreation, and community activities.[72]

Perusal of Mountain-Plains documents and personal interviews with State Office personnel disclose an ambivalent attitude toward post-placement support services. It is clear that some State Offices have assigned a higher priority to followup than others. This could be interpreted as indicative of the philosophy that following placement and relocation, the family should be on its own. General experiences with disadvantaged workers suggest, however, that the crucial problem is often not job placement so much as job tenure--not merely getting a job but holding it. The Cornell University study is one of several suggesting that a strong support services component can contribute greatly to achieving employment and earning goals of employment and training programs.[73] Unfortunately, the limited availability of Mountain-Plains data makes analysis of this issue very difficult.

Apart from the importance of supportive services, followup provides vital data for administrative reporting and for use in research and evaluation. Before January 1975, followup reports were required within three weeks after exit from the center, and again after three, six, twelve, eighteen, and twenty-four months. Now only three-week and three-month reports are completed by State Office staff. Data-gathering procedures involve both personal interviews and followup administration of achievement and psychological tests. Research followup requirements were reduced significantly in 1975 following NIE's contract agreement with ABT Associates for third-party evaluation.

Efforts and Results

Mountain-Plains' achievements in the areas of recruitment, selection, job development, placement, and followup can best be assessed within the framework of its varied program goals. In its July 1974 Proposal to NIE, Mountain-Plains listed goals in four major areas:

1. Development: To design, implement, and develop a rural residential career education model
2. Research: To conduct research and evaluate the effects of the model
3. Products: To provide guidelines, procedures, cost analyses, and curriculum that would permit replication of the model
4. People: To provide career education to a significant number of the rural disadvantaged families within a six-state region.

During the four-year period from May 1, 1971 to May 1975 Mountain-Plains achieved a more or less stable configuration. The six

State Offices were established during the fall of 1971, and began establishing agency relationships, conducting family recruitment, and performing related functions. Although a chronicle of these years is beyond the scope of this monograph, it is clear that a regional program of this type cannot come into existence without significant problems. In one view, failure of the Mountain-Plains Board to provide clear, operational identification of the target population might have made recruitment and selection difficult, uncertain, inconsistent, and frustrating for both State and center staff. Failure to meet participant quotas, inconclusive research data, and unreasonable burdens on staff are only a few of the consquences.

A closely related matter concerns program philosophy. As suggested earlier, basic questions concerning recruitment, selection, job development, placement, and followup processes not only indicate a need for formal policies and procedures, but also suggest guidelines for discretionary judgments that State staff must inevitably exercise.

Given the lack of clarity and consistency in identifying the target population and specifying a uniform program philosophy, it must be acknowledged that to some extent six models have been developed, not just one. Again, three and one-half years of experience indicate that the models have worked--but how well?

Answering this question demands evaluation of Mountain-Plains' potential for research--the focus of the second program goal. However, beyond the generalizations already presented, evaluation of this process must be deferred pending availability of more adequate data.

As for the third goal--products--at the time of this writing, a draft of a potentially valuable State Office Handbook is being revised; this document could well become useful not only for future Mountain-Plains operations but also for other programs involving recruitment, selection, job development, placement, followup, interstate cooperation, and a federally monitored center/field operations structure.

With respect to the fourth goal concerning people, it is a matter of judgment whether the 800 plus families served by Mountain-Plains--less than one-half of one percent of the estimated potential target population--constitute a significant number. Whether they have been served at reasonable cost (Mountain-Plains' five-year budget approximates $20 million) is a separate and far more complicated issue. Observation suggests, and individual case studies bear out, that a great deal of good has come from the Mountain-Plains program.[74]

LESSONS LEARNED FROM THE MOUNTAIN-PLAINS EXPERIENCE

The lessons learned from Mountain-Plains' experience are discussed in relation to tradition, innovative development, theoretical literature, issues, and policy questions.

Tradition

Traditionally, disadvantagement has been defined as a combination of poverty and some impairment or handicap that restricts an individual's opportunity or capacity to learn. The Mountain-Plains experience suggests that disadvantagement can be a combination of these and many other factors, including conditions attending one's own family and his or her parents' family.

Innovative Developments

Student Government

New forms of student government, usually tending progressively toward increased student participation in school administration, have become more prevalent in the recent past. Few of these student government forms are educational in focus, and most have application only in the immediate school setting. The MoWINDS (Montana, Wyoming, Idaho, Nebraska, North Dakota, South Dakota) Council, Mountain-Plains' student government, provides opportunities for students to obtain leadership training and to participate in social action and community development programs. Furthermore, the training provided has practical application in students' present and future environments. Knowledge of leadership, social action and community development principles and processes can help the student find and retain a job after exit.

Placement

Student placement is gradually emerging as an important responsibility of public schools. Mountain-Plains has augmented that responsibility by ensuring that the student contacts and is interviewed by perspective employers before completing training or career guidance, while the assistance and support of program personnel are still available.

Theoretical Literature

The Mountain-Plains experience corroborates at least three arguments advanced in current literature:

- Occupational choice focuses on a broad selection and gradually narrows a student's range of preference and enhances the student's employability and lifetime career development.

- Career education relies heavily upon development of and interaction with community resources. At Mountain-Plains these tasks are primarily the responsibility of the six State Offices.

- Case studies can provide valuable insights for program staff relative to how well program completers adjust to the requirements of the world of work. (Such case studies must encompass not only occupational skills, but also the interpersonal skills, work habits, physical and emotional characteristics and value orientations that persons bring with them to a job.

Issues

It is often debated whether public education is responsible for student placement and followup following program completion. Mountain-Plains asserts that both functions are public education's responsibility. In fact, utlimate accountability for the program's two major student goals--employability and life satisfaction--rests upon assuming responsibility for placement and followup functions.

Policy Questions

Should students be encouraged to select an occupational area early in order to avail themselves of more placement opportunities? Or should they be encouraged to explore occupations at length in order to broaden the base for selection? Mountain-Plains opts for a brief but intensive period of exploration followed by a fairly definite selection. The rationale behind this approach is that intensive training followed by placement is more valuable to a student than the additional satisfaction he or she _might_ derive from prolonged exploration.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This concluding section focuses on the question, What lessons inherent in the Mountain-Plains experience can be used by other organizations, agencies, programs? The answer depends in part on whether the lessons are to be applied to R & D programs, where research controls are important, or to essentially service-oriented programs, where flexibility, operating efficiency, and equity may be paramount.

Impact on Families

Heads of households and total families acquire job skills and interpersonal capabilities that significantly enhance their chance for a better life. Many develop a more positive self-image, stronger commitment to productivity, and above all, a more realistic perception of the world of work--its demands, rewards, and impact on the lives of most men and women. Attitudinal change seems to be a more crucial factor than development of technical skill.

This transformation--observable in terms of job, income, home situation, and community involvement--is a source of deep satisfaction, particularly for State Office staff whose recruitment and followup functions afford them a unique opportunity to see the "before" and "after" circumstances of student families. The psychological impact of temporary relocation to Glasgow; the nine-month preparation for a fresh start in a new location; and the satisfaction of having made a commitment and seen it through as a family unit--may all be central factors in explaining success of the model.[75]

Nature of the Target Population

Almost certainly the empirical evidence will show that the population served by Mountain-Plains is not a cross section of rural, disadvantaged, multi-problem families--and certainly not a sample of the most needy one percent or five percent of the potential target population. In fact, families possessing characteristics that fortell higher potential for program success have been consistently selected over those with greater apparent need. Mountain-Plains officials have acknowledged this practice of "creaming," but justified it on the basis of limited program and environmental capability.

This suggests that the lessons of Mountain-Plains probably apply more to programs aimed at a disadvantaged but not too disadvantaged population.

Conclusions

Program Evaluation

Like many other R & D efforts, Mountain-Plains has been difficult to characterize--partly because many program elements have undergone continual modification. And, of course, Mountain-Plains wears two hats: service-to-people and R & D. Lack of authoritative descriptive materials, policies and procedures, and statistical data on program efforts and results have handicapped attempts at evaluation and analysis. Communication delays, administrative changes, and major modifications in timing and procedures have reduced the study to an investigation of program _efforts_ and _experiences_, rather than an analytical evaluation of _products_ and _results_. It can be anticipated, however, that forthcoming products and better data will shed further light on the Mountain-Plains experience.

Recommendations

Program Deficiencies

It is wise at the outset to clearly define program objectives and philosophy, and to identify the target population. Subsequent changes can, of course, be made by the appropriate policy making authority. But practitioners both in the field and onsite should have a clear perception of _what_ they are doing, _how_ to go about it, _for whom_ it is being done, and _why_ the enterprise is functioning in the first place. A looseleaf handbook of policies, procedures, and priorities governing recruitment, selection, job development, placement, and followup should be provided for use of all staff. Precise operational job descriptions can minimize ambiguity regarding specific responsibilities, and provide a basis for evaluating the performance of staff members.

Communication

Effective communication among program personnel is essential to efficiency and high staff and participant morale. A formal structure for assuring effective communications is recommended, particularly when staff are geographically distributed over hundreds of miles.

CHAPTER VII

SUMMARY AND CONCLUSIONS

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SUMMARY AND CONCLUSIONS

There is strong evidence that the Mountain-Plains program significantly increases employability, enhances personal development, increases job satisfaction, and enables former problem employees to become contributing employees.[76] The University of Utah is currently conducting a study of Mountain-Plains' cost-effectiveness, and there are indications that the program is cost-effective.

Chapter VII summarizes the monograph in light of implications for researchers, policy makers and scholars concerned with the educational and socioeconomic needs of the rural poor. The chapter concludes with a brief comparison between Mountain-Plains and six other family-residential educational programs, as well as other rehabilitative programs in the mountain states.

Summaries of the lessons learned at Mountain-Plains are presented under six topical headings:

- Management
- Tradition
- Innovative Development
- Theoretical Literature
- Issues
- Policy Questions

Management

Management includes the functions of planning, organizing, staffing, directing, coordinating, operating, reporting and budgeting.

1. The Mountain-Plains model may be more replicable than one would at first believe. Comprehensive planning could be the key. For example, low income housing developments might be built adjacent to an educational complex. Increasing numbers of vacant school buildings, vacant churches and colleges and deactivated military installations constitute potential facilities.

2. It is important that a social action program maintain close, cooperative working relationships with state agencies (e.g., the Employment Security Commission, Department of Welfare, state vocational rehabilitation and state correction agencies) and federal agencies (e.g., the Bureau of Indian Affairs, HEW, and Public Health Service).

3. The effectiveness of a social action program is enhanced when systems approaches to management are used, i.e., when all components are arranged in regular order, linked by logical planning.

4. A practical, participatory administrative model (corporation model), using a data-based decision making mode, is more effective than a hierarchical administrative model based on line and staff authority.

5. A planned, managed approach to programmatic change, with established procedures for staff and students to communicate with management is effective in keeping learning experiences responsive to students' needs.

6. Staff members function more effectively when given wide latitude on how to carry out their responsibilities. These responsibilities should be clearly prescribed, but in broad terms, through participatory administrative procedures.

7. Controversies over design, organization and operation can be resolved on the basis of strong leadership and reality testing via a base of research data concerning societal and target population needs.[77]

8. In order to move quickly and efficiently from planning to implementation, several steps in a design process can, and should, be in progress simultaneously.[78]

9. Staffing should be flexible because the technical expertise required for the completion of a design and development effort undergoes change in the midst of that effort.[79]

Tradition

Tradition refers to knowledge and practice generally accepted in education over time.

1. Contrary to some opinions, most instructors can--given systematic guidance and adequate technical assistance--produce usable curriculum materials.

2. In order to serve students most effectively, curriculum and instructional practice should focus on student mastery of competencies rather than exposure of content to the student.

3. Students generally learn more efficiently when required competencies are fixed and content and time are the variables, than when content and time are fixed and competencies are the variables.

4. Educational programs do not have to *reinvent the wheel.* Implementors can draw upon prior knowledge and practice as illustrated by the following program elements adapted by Mountain-Plains for its own use:

    - Health care and community child care resemble those of established poverty/rehabilitative programs.

    - Foundation Education resembles curriculum generally offered in a secondary school setting.

    - Occupational Preparation curricular resembles usual vocational education programs.

    - Personal development counseling, like that offered at Mountain-Plains, is normally available only at colleges and universities.

    - Individualization of curriculum is usual only in university graduate education.[80]

5. Counseling and career guidance are traditionally provided by a single person. However, each is vital and requires the attention of a full-time specialist.

6. Historically, society has made entry level requirements more stringent than actually necessary for successful on-the-job performance. Comprehensive and detailed skill and job analysis can be used as a basis for defining the necessary amount of preparation.[81]

7. Including the entire family in an educational program enhances a student's potential for employability and life satisfaction. Many previous programs may have failed because while the head of the household--often the father--was improving his skills and advancing, other family members were sometimes left behind.

Resenting their own inability to progress, they may have limited the family's potential upward job mobility by failing to provide the head of household the essential support required.[82]

8. Tradition often emphasized education of the student in terms of his or her own individual apparant needs, without consideration for society's needs. Actually, personal and social needs are so closely interrelated that to overlook society's expectations, including productivity, denies a student some of the requisites for employability and life satisfaction.

9. Disadvantagement can be the result of many factors--not just poverty and physical or mental impairment. All relevant factors should be considered.

10. Many evaluation designs follow only one discipline; however, an interdisciplinary, multi-methodological approach permits a more comprehensive, interactive framework for data collection and analysis.

11. Student diagnosis and evaluation are improved when standardized tests are supplemented with criterion-reference tests and performance validation.

12. Evaluation of staff performance on several levels, with provision for student evaluation of staff relative to rapport and competency, is more reliable then subjective evaluation by a single supervisor.

Innovative Developments

Innovative Developments at Mountain-Plains comprise teaching-learning approaches unique to a specific population in a particular setting.

1. A student can become his or her own curriculum manager, with the instructor serving as a resource person within the learner-centered environment.

2. In educational programs, cultural, social and occupational concerns can share the emphasis formerly granted academic concerns.

3. Personalized self-instruction can supplement institutional curriculum.

4. Attention to attitudes and life styles can be integrated into the student's and family's total educational experience.

5. A public institution can assume and carry out responsibility for assisting a student and family with career choice, preparation and placement.

6. Counseling approaches can be adapted to a student population like the one served by Mountain-Plains through student needs analysis predicated upon interview data from counselors, students and instructors and upon followup analysis of program successes and failures.

7. Students' learning-by-doing opportunities can be improved through a careful task analysis of potential work places and the development of curriculum and teaching strategies for imparting skills and knowledge required to perform identified tasks.

8. Student government, often limited to students' giving advice on school affairs, can be broadened to include opportunities for leadership training and participation in social action and community development activities.

9. Awareness of the interactivity among the internal and external forces that shape programs is essential to comprehensive evaluation.

Theoretical Literature

Lessons learned at Mountain-Plains corroborate and advance extant literature in four major areas: curriculum, student behavior, counseling and guidance, and community resources.

Curriculum

1. To maintain relevance in a changing world, curriculum should emphasize process or decision making models.

2. Curriculum objectives should be hierarchical, traceable from the highest level (e.g., the program mission statement, to the personal level (e.g., the individual student's learning activity package).

Student Behavior

1. A student's terminal behavior for each unit should be expressed in such a way that the student's progress may be evaluated by cognitive test or a performance test or both.

2. Students are more highly motivated when they can see a direct relationship between their learning activities and their career goals.

3. Learning is enhanced when students receive constant, positive reinforcement.

Counseling and Guidance

1. Counseling approaches designed to help students identify and complete inappropriately resolved developmental tasks are effective with disadvantaged student populations.

2. Career guidance programs for disadvantaged students should focus on helping an individual fashion a favorable self-concept and evaluate possible career options in regard to that self-concept.

Community Resources

1. A student's chances for employability and life satisfaction are enhanced when the institution he or she attends maintains awareness of current labor market trends by interacting regularly with management and labor organizations, employers and community agencies.

Issues

Issues refer to questions about which there is dispute and debate. Mountain-Plains has taken a position on each of the following issues in the interest of meeting the needs of the population it serves.

1. The possibility of a student's being distracted by family activities and responsibilities exists, but seems to be more than offset by the benefits of practicing new skills and receiving reinforcement in a family context.

2. The tendency of a self-paced learning approach to encourage rapid completion of too narrow a curriculum must be countered by careful monitoring of each individual's progress.

3. In the interest of making a program responsive to needs of students and staff, school administrators should be involved directly in curriculum and instruction.

4. The individualized, analytic approach of breaking complex tasks into their subcomponents to simplify instruction raises some question concerning whether the student can relate these many individual tasks to broader career goals. Careful monitoring and curriculum review procedures can be employed to assure that each learning activity is meaningful to the student.

5. Teaching and learning become more comprehensive and relevant for the student when public educators assume responsibility for student placement and followup after program completion.

6. Student performance objectives can and should be stated explicitly so that the extent to which they are achieved can be measured.

Policy Questions

Policy Questions derive from selecting among alternatives a feasible, effective course of action given the context within which a program operates.

1. Should all education programs be partly developmental in focus? Mountain-Plains' experience suggests that conscious provision should be made for developmental activities to keep an educational program vital and responsive to students' needs.

2. Are life roles too general and subjective to serve as a basis for curriculum development? Life roles are an essential context for learning if curriculum is to have relevancy for the learner.

3. What should the emphasis of education for disadvantaged persons be? Individualization of instruction seems to preclude broad generalizations that emphasize maintenance or further development or remediation. Emphasis must vary with the individual.

4. What should the role of evaluation be vis a vis a social action program? Mountain-Plains recognizes that evaluation cannot be separated from the treatment but must instead be imbedded within that treatment. Further, it is recognized that evaluation cannot be instituted as a closed system merely paralleling the remainder of the program.[83]

5. Is intervention by the grantor necessary in social action programs? Such intervention should not be arbitrary, but a planned effort to provide the benefits of counseling, objective observation, stimulation and thought provoking discussion that may lead to required improvements or redirection at critical stages.[84]

6. Is the public deriving educational benefits from research and development programs funded by federal sources? The success of Mountain-Plains' graduates would suggest that the public is deriving educational benefits from the program in terms of return on investment (e.g., the increased earning power of students completing the program and decreased dependence on other assistance programs funded from federal sources).

7. Should students settle on an occupational choice early in occupational exploration? Early selection is preferred for disadvantaged populations because of time constraints and because of the reinforcement that accrues to a student when he or she has a specific goal and is progressing toward that goal.

8. Is there a need for this kind of program? In 1970, some 5.3 million families in the United States were potentially eligible for participation in a Mountain-Plains type of career education program on the basis of both poverty status and rural residence.[85]

9. How does this kind of program fit into broader educational and social service contexts? It is an alternative program with particular potential for a target population who can and will work productively, but who are unemployed or underemployed because they lack saleable skills.

10. What kind of staff are needed to mount and maintain a program of this type? Persons with process skills to manage, monitor and maintain the program; persons with professional skills to counsel and guide students and provide support services; persons with skills in specialized content areas to instruct students and validate their performance. It seems best if program personnel vary in character and background because students are likely to encounter such variation upon entering or reentering the world of work after program completion.

11. What kind of governance is best for a program of this kind? A corporation form of governance seems well suited. The Board of Directors can be representative of the various segments and levels of the region served. The Board's executive officer and staff can execute Board policy directly without the additional layers of administration that usually accrue to public, noncorporation forms of governance. A participatory form of administration, in which students and staff have input to management according to mutually planned and implemented procedures, seems best for a program of this kind.

12. What kind of delivery system is best for a program of this kind? A system in which eligible persons have ready access to the program (within a small region or a state) seems best. The system should be self-contained, with a minimum of movement from place to place required by the student. Also, the system should be total in the sense that it delivers all the diagnostic, counseling, guidance, social, educational, occupational preparation, placement and followup services required.

13. What types of learning experiences should be offered in a program of this kind? All experiences should be individualized in the sense that they are based on a thorough diagnosis of each individual's needs and career goals.

Comparison of Mountain-Plains with Other Programs

Comparison with Six Other Residential Education Programs in the United States

A study of seven residential educational programs completed February 28, 1973[86] concluded that Career Education Model IV, as operated by Mountain-Plains, represents the most advanced stage of the family residential educational concept, and that its systematic research approach is capable of revealing the concept's true worth.

Comparison categories used in the 1973 study were:

- Mission
- History
- Governance
- Location
- Facilities
- Management/Staffing/Budget
- Target Population/Capacity

- Recruitment/Placement
- Program
- Program Support
- Research/Evaluation
- Costs
- Relationships with other Agencies
- Plans for Continuance.

It is understood that ABT Associates is currently conducting a comparative study of programs of this type.

Comparison with Other Rehabilitative Programs in the Mountain-Plains States

Twelve rehabilitative-type programs in the Mountain-Plains states were compared in a study[87] conducted by ARIES Corporation and reported October 9, 1974. Briefly, the study findings showed that--

- None of the other programs had entrance criteria as selective and exclusionary as those of Mountain-Plains.

- While the training provided by these other programs was similar, Mountain-Plains was unique in its career-education approach to occupational rehabilitation.

- At Mountain-Plains, services were integrated and located onsite, while other state programs often relied on public service agencies to provide social and educational services.

- Only Mountain-Plains dealt with the total family as the rehabilitation unit.

- Mountain-Plains' role as a research and development project made it unique among manpower programs in the six-state region.

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FOOTNOTES

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